

OPERATOR DIGEST

SUMMER 2021 | NUMBER 149



Quarterly Newsletter of the
Environmental Operators
Certification Program – BC/Yukon

SECONDARY UPGRADE

GREATER NANAIMO POLLUTION CONTROL CENTRE

Secondary Clarifiers
with a view towards
Hammond Bay

Photo credit: Multivista

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OPERATOR DIGEST

The **Operator Digest** is the official newsletter of the **Environmental Operators Certification Program**.

Submissions for publication in the Digest are welcome. Please email them to the EOCP office at eocp@eocp.ca

Changes of address, annual dues, Continuing Education Requirements, exam applications, as well as general enquiries about the program should be addressed to:

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The Environmental Operators Certification Program is a charter member of the Association of Boards of Certification and is a registered society with more than 4,500 active members.

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OPERATOR PROFILE

Kyle Giesbrecht

WET Program Grad

What made you decide to become an Operator? The desire to learn the many aspects of water treatment and to work in a field that is needed around the world. My long-term goal as an Operator is to do my best to help First Nations communities in BC and Canada have and maintain clean, safe drinking water. Growing up, seeing the promises made to eradicate drinking water advisories, but focus has not always been there, and needs to be a priority.

I was studying environmental management, and during the first semester, I found out about watersheds, and found it interesting. But then, after I entered the WET program at Okanagan College, I saw lots of job opportunities and it resonated with me.

How long have you been in your current workplace? I have spent eight months over the past two summers working for the Regional District of Nanaimo as a Water Utilities Technician Trainee, doing both drinking water treatment and distribution. I am now working there again doing drinking water treatment and distribution until the end of September.

What are your core functions? To continuously improve services and the quality of life for residents by providing clean, safe drinking water while maintaining and upgrading distribution infrastructure and treatment processes. I covered a lot of ground working main breaks, checking systems, valve maintenance and repairs. I also worked on some small systems and did a bit of wastewater collection work as well. There are many opportunities to work on many different components.

What is your typical day? Each day is slightly different, but the daily tasks are often: water treatment plant maintenance, hydrant maintenance, chlorine distribution, tending to service line and water main repairs, meter replacements, sample collection and lab analysis, and water system checks.

What do you most enjoy about the work? Effectively trouble shooting



issues that may arise, helping optimize processes to run as smoothly as possible, constantly learning new things each day, and providing a service to people that they can rely on.

What are some challenges you faced?

Having minimal experience in the field was challenging at first, but the Regional District of Nanaimo Water Services crew were extremely helpful and patient as I developed the necessary skills throughout my work terms.

Can you speak of any highlights in the past year? Through the continued first-hand experience and excellent guidance from the RDN team, I developed a solid grasp of the many aspects that the job entailed and was able to actively participate in trouble shooting problems that were very specific to each water system. This further understanding allowed me to feel more confident in my ability to manage some site-specific issues and tasks with little to no supervision.

What advice do you have on how to have a successful career as an Operator? Keep an open mind, there are always new things to learn from other people and other situations. Focus on leveling up your skills, don't be afraid to ask for help, strive to do your best and try to find enjoyment in everyday tasks.

'Operator Profile' continued on page 10

MESSAGE FROM THE DIRECTORS AND STAFF



We started off this year with so many plans thinking that the worst of the pandemic was over. Yet, here we are, Summer 2021, still dealing with ramifications of the pandemic, and we have fires to deal with as well. But we manage to move along, doing what needs to be done:

1. We continue with exam sessions across BC and YK. On occasion, when a facility



Chris Lawrence

Kalpna Solanki

is not available, EOCP staff will travel to invigilate exam sessions.

2. We are working to ensure that facility classification data is as accurate as possible. We may have the best CRM for a classification/certification body in North America, but the data is only useful if it is current. Please note that ALL facilities need to be reclassified every five years, or sooner if significant changes are made to the facility. If you need any assistance with your facility's classification, please contact us at eocp@eocp.ca or 604.874.4784.

3. Work continues on our conference – a conference 'Designed for Operators by Operators' that has a full program with four concurrent streams over two days. Since leadership and building effective teams are more important than ever before, our keynote, Eric Termuende will be focusing on these. Register now at <https://tinyurl.com/EOCP2021>
4. At our first board meeting after the Annual General Meeting, the new board executive was elected. See page 13 to meet the new executive team.

5. Lastly, the directors, staff, and several stakeholders met to develop the EOCP's new strategic plan. The EOCP had its first full Strategic Planning session in 2016, and we built on that in 2017, culminating in the development of four Strategic Priorities. These priorities have enabled us to remain focused as we navigated our way through the many many changes the EOCP has gone through since 2016. We are very excited to present the new Vision, Mission, Values, and Strategic Priorities that we have collaboratively developed, that will help us chart our course through 2021 to 2024.

We cannot end without acknowledging how so many across BC and YK continue to be affected by the pandemic, the fires, and the ongoing discovery of unmarked graves at residential schools. Our hearts and thoughts go out to all those affected.

Chris Lawrence, Board Chair
Kalpna Solanki, President and CEO



EOCP 2021-2024 STRATEGIC PLAN

Vision*

A Canada where all people have access to safe tap water and effective wastewater management. We are committed to making this a reality.

*These will be presented to the membership for ratification at the EOCP's 2022 Annual General Meeting.

Mission*

To protect human health and the environment by investing in Operators and facilities through increased knowledge, skill, and proficiency in all matters related to the water cycle.

Strategic Priorities

1

Encourage sustainability of our industry by promoting the Operator profession, education, training, and recruitment.

1. Develop regional specific promotional campaigns to reach the general public
2. Evaluate existing education programs and training providers to assess gaps
3. Increase outreach to potential students to promote water industry careers
4. Outreach to education funding programs to promote the water industry as 'the' career of choice

2

Advocate to strengthen the industry, with a focus on vulnerable communities.

1. Advocate support for small and vulnerable communities
2. Bridge connections with key stakeholders
3. Build capacity within the industry

3

Develop and promote existing and new certification and classification programs.

1. Assess the industry to seek new opportunities for certification and/or classification
2. Collaborate with stakeholders to ensure programs are in the public interest
3. Oversee classification and certification for more jurisdictions
4. Continually assess and improve certification and classification programs

4

Continue to develop the CRM as our primary data collection, reporting, and communication technology.

1. Prioritize the CRM to improve reporting functions
2. Increase data sharing and communication
3. Capture all facility classifications, including SWS and SWSs



Regional District of Nanaimo - Greater Nanaimo Pollution Control Centre Slideshows - April 14, 2020

SECONDARY UPGRADE

In the upper left are the Activated Sludge Bio Reactors. The Secondary Clarifiers are in the forefront.

GREATER NANAIMO POLLUTION CONTROL CENTRE

By Rob Skwarczynski CWWP, Chief Operator,
Wastewater Services, GNPCC

An \$82 million upgrade was recently completed at the Greater Nanaimo Pollution Control Centre (GNPCC) that adds secondary treatment to the wastewater treatment process and increases capacity for growing communities within the Regional District of Nanaimo. The project utilizes technology that has increased the removal of solids from the wastewater from 50% to 90% before treated effluent is discharged to the ocean, helping to improve the local environment. Below are responses to some questions on the why, what, and how of the changes.

What changes were made?

The Greater Nanaimo Pollution Control Centre was upgraded from a Chemically Enhanced Primary Treatment (CEPT) Wastewater Treatment facility to a Conventional Activated Sludge/MLE Secondary Wastewater Treatment facility. The \$82 million upgrade includes these additions:

- Three bioreactors
- Three secondary clarifiers
- New parshall flume
- New grit/grease removal process
- New Influent Screenings building and process
- DAFT process
- New Maintenance building and workshop

- New Storage building
- Upgraded Operations Services building
- Upgraded Operations building and Laboratory
- Upgraded Solids dewatering Process with the addition of two new centrifuges
- Upgraded Anaerobic digester
- Upgraded Hydro supply and back-up generator
- Upgraded odour control system

Why?

Changes were completed to upgrade the entire facility, and to meet new regulatory target guidelines. Staff at the GNPCC successfully commissioned the newly upgraded Secondary process, and the results are exceptional. The following provides a comparison of before and after effluent results for various parameters:

	BEFORE Primary Process Effluent	AFTER Secondary Process Effluent
TSS	65 mg/L	5 mg/L
cBOD	105 mg/L	4 mg/L
Ammonia	38 mg/L	18 mg/L



Far back on the left is the new Storage and Maintenance building (yellow front). Covered Grit tanks and Primary Clarifiers are bottom and centre.

Long term impacts

- Long term impacts are very positive as the GNPCC facility no longer requires the use of bulk Alum for the previous CEPT process. This reduces chemical costs and creates a safer workplace, as staff no longer are required to handle this bulk product. Producing a much more polished effluent positively impacts the receiving marine waters, which contributes to a more sustainable environment. The upgraded facility was also designed with redundancy in mind, to ensure Operational reliability

and resiliency. The upgraded facility has increased the GNPCC's ability to provide continued wastewater treatment service for future years, with increased facility resources for Operational and Maintenance staff.

Lessons learned

- All staff at the GNPCC gained valuable experience during the project design, construction, and commissioning phases. Having this knowledge and experience 'in-house' has made every GNPCC staff member a valuable resource for future GNPCC and RDN projects.

- Taking extra time during the project design and engineering phase is very important, and will ensure the end product delivers as intended.
- As usual 'Teamwork makes the dream work' and many departments within the Regional District of Nanaimo worked closely together to guide this project into the finish line. Having these dedicated and caring staffing resources ensures that the future of the GNPCC is reliable and sustainable.



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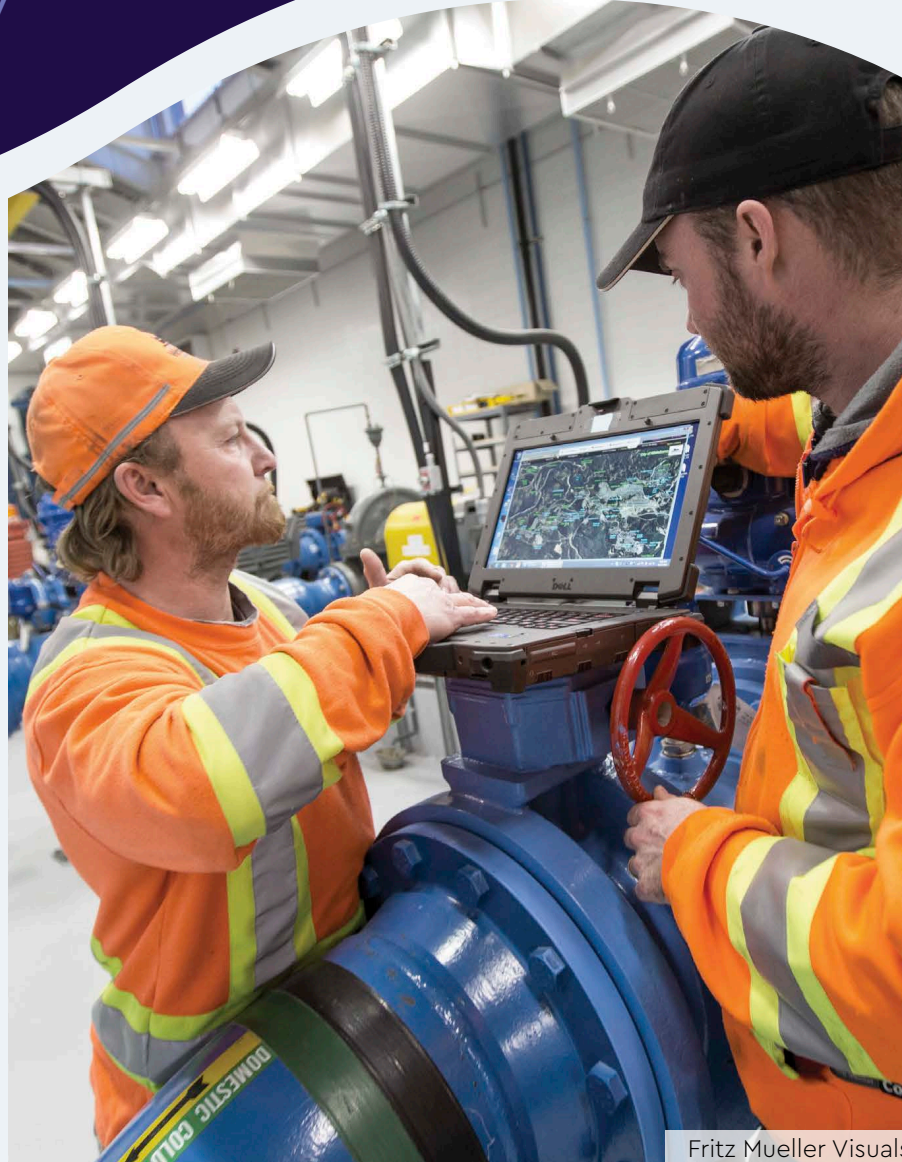
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FUNDAMENTALS OF WATER AND WASTEWATER OPERATIONS

A new BCIT program in the Lower Mainland

By Kalpna Solanki CPHI(C) BSc MBA

It wasn't even two years ago, that Metro Vancouver, BCIT, and the EOCP started a conversation on the need for an Operator training program in the Lower Mainland – where the need for water and wastewater Operators is acute.

It took a lot of coordination, collaboration, and determination, but fast forward to 2021, a full cohort of students started in the program in January. I took the opportunity to connect with Syed Abdullah (Zaki), Program Coordinator and Instructor, School of Construction and the Environment, and checked on how the program was progressing.

Where are the students from? All the students are from the Lower Mainland, and some of them are working for Metro Vancouver, and the others are hoping for employment in the field.

How successful have the students been in obtaining Co-Op terms? Very successful! The students are either already working for Metro Vancouver or obtained 6-week Co-Op placement with Metro Vancouver.

What are some of the strengths of this program: The program covers the four areas that Operators work in: water treatment, water distribution, wastewater collection, and wastewater treatment. The feedback from the students on the components of the program has been very positive. The feedback from the instructors has also been positive. The goal of the program is to give as much real-life experience as possible.

What happens when the pandemic is over? The program is designed for distance learning and most components will remain online. Students however would come in for field trips when travelling restrictions ease.

What are some words of wisdom for future students? BCIT uses a learning hub, and it is helpful if students come with expertise of using online learning tools. If the students come with motivation to work hard on their studies, there is great support from the sector for Co-Ops and ultimately employment!



Shane is performing a total suspended solids test at Metro Van's Lulu Island Wastewater Treatment Plant laboratory. The test result is for the Lulu WWTP Operations group.

In addition to speaking with Zaki, I also had an opportunity to connect with two charter students of the program, **Shane Burr (SB)** and **Farhan Baig (FB)**:

What interested you in the program?

SB: I currently work in a laboratory, but have always had an interest in the operations side. Interest has always been more on the macro level, and really enjoy the science behind the operating. What's going on in each tank, the reactions, and the microorganisms involved, etc. Although working in a lab at a WWT facility, I am also very interested in the other components, and being able to put the full picture together in terms of how the different components interact with other.

FB: I was interested in the program long before the program started. I worked with two colleagues previously in the dental industry and they moved onto working at Iona, and told me about the program. Also of interest was the salary and the hours. I was not that interested in the trades, and although interested in the program, could not move to Kelowna or Kamloops to take the program. When the BCIT program came up, it was just perfect. But going back to school in my 40s was a bit intimidating, but career changes can be made at any time. The bonus was that with COVID-19, BCIT developed this as a distance education model, which was perfect for someone with a family who is working.

The instructors are within the industry, having a high chance of placement, so the combination was really useful.

How have classes been progressing for you?

SB: The pace and content are very good. I have had a chance to move ahead a little bit as I've had some time available.

FB: They have been progressing very well. Moving to an online format has been a bit of a change, but it works well, and I feel that I have adapted well. The education has been useful for my work at Iona where I started working soon after the wastewater treatment module ended.

What is your goal when the program ends?

SB: I will likely have some more options; the program will help me personally, and also be of help to Metro Vancouver. The goal is to personally enhance my own knowledge and work with the organization as it undergoes some major upgrades and expansion. I am already working as a team lead, and this will help Metro Vancouver achieve a better end product.

FB: I want to write my OIT exam, accumulate work experience, and then write my Level I exam. My long-term goal is to become a Level IV Operator, and I hope to move up into management at

'Fundamentals' continued next page

some point. That is the benefit of taking the program at BCIT and working at Metro Vancouver. Also, having reciprocity in place which allows me to work anywhere in Canada is a bonus.

What are you more interested in – water or wastewater, and why?

SB: Both have very interesting components. Until the program, I did not know the aspects related to water distribution such as preventing contamination when repairing breaks. There is also interesting science behind water treatment. In general, I find them both equally interesting.

FB: Currently, I am working in wastewater as it's a growing industry, and Metro Vancouver is building a solids dewatering facility. Also, with wastewater treatment, there is such a huge potential to protect the environment.

What advice would you give to anyone thinking about the program?

SB: I would say "go for it"! A bit biased as I really enjoy this. Three stakeholders have come together to help develop a program that is of benefit to everyone in the Lower Mainland. It is difficult to get people to go to programs elsewhere, and difficult to



As a utility worker, Farhan Baig gets to use a RTV to move equipment around.

get graduates from the other programs to stay here after their co-op programs end. Win:win:win.

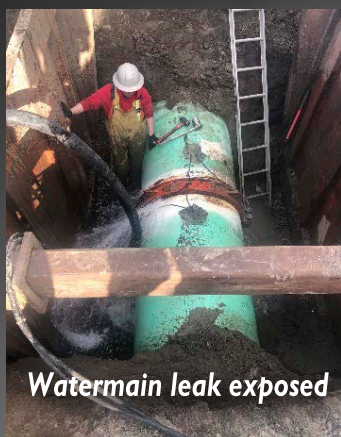
FB: Definitely do it! It opens many doors for those thinking of a career change, or for those who are starting off in their careers. There is such a great opportunity

to work in an organization that protects the environment. The wages and benefits are also very good. I have been recommending the program to others.

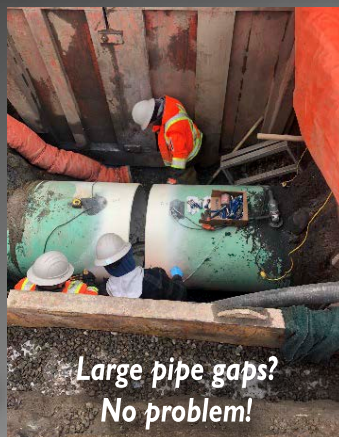
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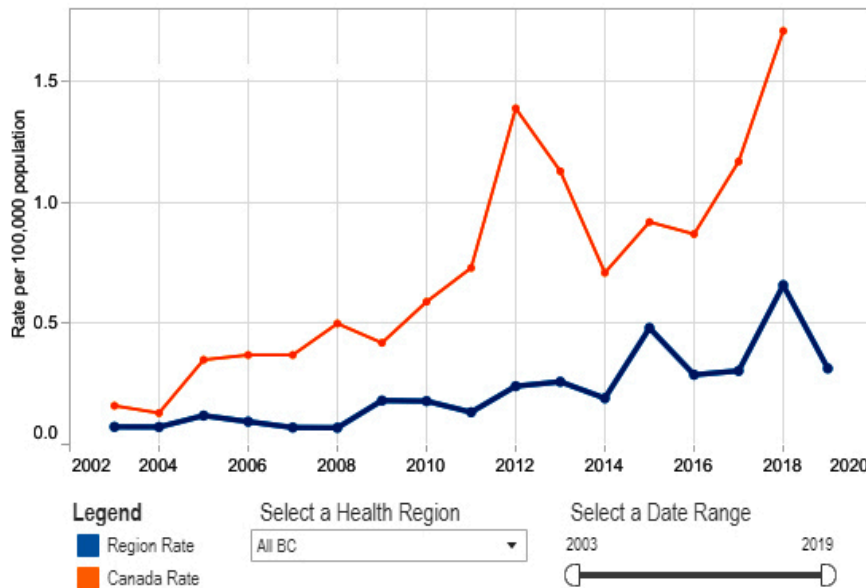


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BUILDING WATER SYSTEMS CERTIFICATION

THE WHO, WHAT, WHY, AND HOW

Legionellosis, 2003 to 2019, All BC



By Kalpna Solanki CPHI(C) BSc MBA

Legionella was discovered after an outbreak in 1976 among people who went to a Philadelphia convention of the American Legion. Those who were affected suffered from a type of pneumonia that eventually became known as Legionnaires' Disease.

Interestingly, Legionella was also implicated in another illness previously. The first identified cases of Pontiac fever occurred in 1968 in Pontiac, Michigan, among people who worked at and visited the city's health department. It wasn't until Legionella was discovered after the 1976 outbreak in Philadelphia that public health officials were able to show that the same bacterium causes both diseases. While there is no vaccine, the disease is preventable as it is almost always connected to improperly maintained mechanical systems.

Monitoring the disease trends in Canada shows there is a reason to be concerned about the incidence of Legionnaires' Disease in Canada. Considering that these are only the reported cases, there is a very strong likelihood that individuals with milder forms of the illness may have attributed it to a cold or flu and may not have even sought treatment. There is also the strong possibility that many who did have Legionella were never tested even if they did seek medical attention.

Legionella are associated with the built environment. The bacteria can proliferate in poorly maintained plumbing and building mechanical systems and are transmitted through inhalation of contaminated water that has been aerosolised, but not by ingestion of water. Sources include, but are not limited to, cooling towers, domestic water systems, water features, ice-making machines, whirlpool spas, hot springs, and fountains, and this is where the EOCP's new Building Water Systems (BWS) certification comes in.

This new certification came about as a result of a collaborative effort between the City of Vancouver, Vancouver Coastal Health, and the EOCP. By working effectively together, concept to launch of the certification took less than 12 months. Pre-requisites for the Building Water System (BWS) Operator certification, and ongoing requirements to maintain the certification are:

1. 50 hours of experience working as one or more of the following:

- In a relevant red seal trade e.g. plumber, boilermaker
- Facility Maintenance Technician
- Professional engineer working in a related field
- Professional biologist working in a related field
- Certified EOCP Operator
- Water treatment service provider
- Environmental Health Officer
- Drinking Water Officer
- Swimming Pool Operator



Mark Reid testing a fluid cooler in Vancouver.

2. Completion of an accredited BWS course

- Course will be two to three days long
- Course may be in class or online

3. Examination

- Web-based or paper
- \$100
- 50 questions
- 2 hours long

4. Maintaining Certification

- Payment of EOCP annual dues (\$99)
- Completion of 1.2 CEUs (core and related) in every two-year reporting period (first reporting period would be 1st January 2022 to 31st December 2023)

To check on the who, what, why, and how of certification, I took the opportunity to speak with Mark Reid of Pace Solutions Corporation, the first person to gain the Building Water Systems certification.

Where do you work? I work at Pace Solutions, a Canadian water treatment service provider which has locations from BC to Ontario, but I personally provide site services in the region of Vancouver, Richmond, and the Sea-to-Sky corridor. I have been with Pace for 8.5 years.

What does your work entail? I provide water treatment programs to inhibit scale, corrosion, fouling and biological fouling

(including Legionella risk management) in recirculating HVAC cooling water systems such as cooling towers, evaporative condensers, and fluid coolers. I also provide treatment programs for steam boilers, closed heating and chilled water systems.

Why did you pursue certification?

When I saw that this was going to be a requirement in Vancouver as of January 1, 2022, which is the primary region where I work, it made sense to pursue this. It also provides a level of assurance for our customers that their water treatment service provider has this certification. I am being asked by customers almost daily about the EOCP certification, so it's great to be able to share my experiences with them.

How did the process work for you?

The course I took from HC Info was well laid out with good information including worksheets, and test exams. This helped me prepare for the EOCP's certification exam. I was familiar with a majority of the

study material as I have been involved in the industry for 8 years, but I still learned some really relevant content.

Would you recommend certification to others?

Absolutely, 100%. Especially for anyone involved with water treatment programs in the City of Vancouver. Obtaining this certification is valuable for me, Pace Solutions, and more importantly my customers.

Would you recommend permitting of building water systems to other jurisdictions?

I suspect it will eventually be implemented in other regions – this is just the beginning. It is only a matter of time before this becomes mandatory in other areas of BC.

Any recommendations for those pursuing this certification?

HC Info lays out material for the 11 courses well. Anyone taking the course should print out the material for each course to assist them in preparing for the exams.

'Operator Profile' continued from page 2

What do you do when you aren't working?

I enjoy spending time with friends, hiking, kayaking, researching things online, playing piano and guitar, reading, and keeping up with water news/current events.

What else can you tell us about working as an Environmental Operator?

Working as an Environmental Operator is a stable career option. People need access to clean drinking water, to have drinking water systems that are maintained and upgraded, and to have wastewater dealt with and treated.

Whom would you recognize as a mentor?

Lydon Jaworski, Dave Welz, and the rest of the Regional District of Nanaimo Water Services team. Along with David Teasdale, a water/wastewater professor from the Water Engineering Technology program at Okanagan College.



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ONLY 5 MONTHS LEFT IN THE 2020-2021 CEU REPORTING PERIOD!

By Heather Reynolds

Are you looking to meet specific Core requirements for your Continuing Education? Do you need to meet specific CEU requirements to qualify for Certification?

Many Operators enquire with the EOCP Office about which courses qualify as 'core' as they want to meet their requirements for Certification in the most effective way.

While we are always happy to discuss your specific needs via email or phone, below is a How-To for Searching and Filtering Courses within the CRM:



Example - You want to complete a Virtual Course that is core for WWC to meet your CEU Reporting Period.

1. Log into your CRM profile – you can access your login at <https://crm.eocp.ca/>
2. On the top blue tool bar, click '**Career Management**'
3. Click '**Courses**'
4. You have the option of looking at two categories:
 - a. **Scheduled Courses** – events that EOCP has been advised of. Please note that this list is dependent on updates from Training Providers regarding their upcoming training opportunities
 - b. **All Courses** – the full and complete list of EOCP Recognized Training. This list grows all the time.
5. Using the filters and searching, you can reduce the list of recognized courses down to a more manageable size. The filter options are:
 - a. **Course Type**
 - i. Distance Education (Online/Virtual)
 - ii. Course
 - iii. In-House Training
 - iv. Special Event (conferences)
 - b. **Course Number**
 - i. Search field - if you know the course number
 - c. **Course Title**
 - i. Search field - if you know the approximate course title
 - d. **Core**
 - i. BWD
 - ii. BWS
 - iii. SWS
 - iv. SWWS
 - v. WD
 - vi. WT
 - vii. WWC
 - viii. WWT
 - e. **Training Provider**
 - i. Search field - if you know the approximate Organization Title
 - f. **General Search Bar** – here you can enter numbers, course key words, and you can complete search on your filter list.

Please note – this also works on the mobile version of the site, with only a small difference. Once logged in, use the Right-hand menu options to select Career Management > Courses and from there you are given the same options as above.

1. Log into the CRM

2. Click Career Management > Courses > All Courses

3. Using the Course Type Filter – select Distance Education

4. Using the Core filter – select WWC only

You then have a list of **only** the courses that are Distance Education and are core for WWC. Using the Search field, you can further search through the list – or you can scroll and click to view the course details.

FINALLY – click on the course to open the course details and access the Training Provider information. From here, you can contact the Provider via email with any enquiries about the course material or enrollment options.

COURSE	TITLE	TYPE/METHOD	CORE	TRAINING PROVIDER	STATUS	CEU
7073	Utility Management	Distance Education	WWC	State Sacramento		2
7076	Manage for Success	Distance Education	WWC	University, Sacramento (CSUS)		4.5

Please note - These courses represent opportunities for Operators to meet/maintain education for CEU requirements. There is no implied endorsement that any course on its own will meet the requirements for any specific exam.

'CRM' continued page 13



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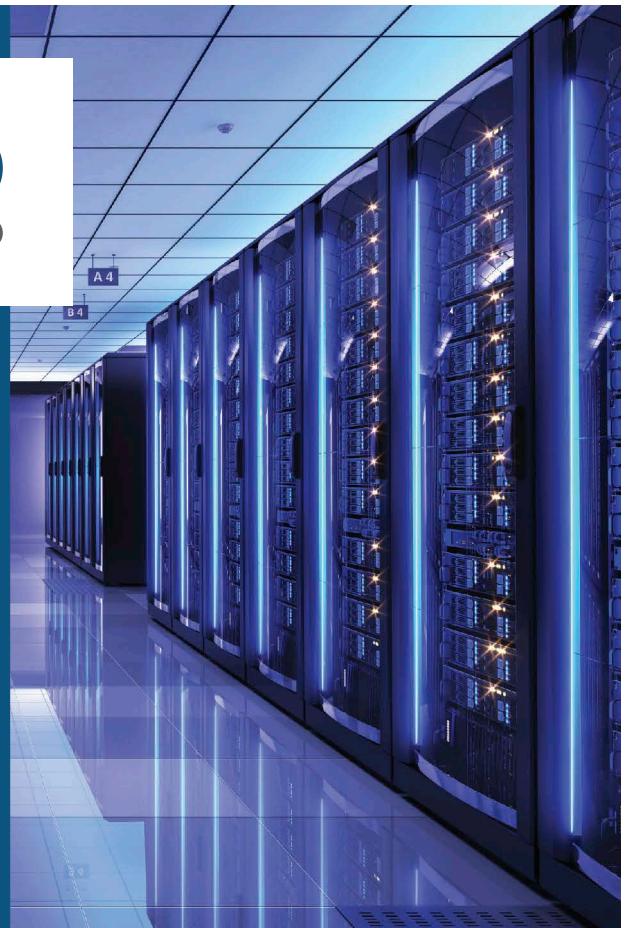
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MEET THE EOCP'S NEW BOARD EXECUTIVE

Along with welcoming two new directors (Robert Birtles and Tara Macrae), and a returning director (Allison O'Neill) to the EOCP's board, in accordance with the Constitution and Bylaws, the new executive was elected by the board.



Chris Lawrence
Chair



Chris Kerman
Chair-Elect



Allison O'Neill
Treasurer



Anna Agnew
Secretary

'CRM' continued from page 11

The CEUs needed per two-year reporting period are:

- Bulk Water Delivery (BWD) – **0.6 CEUs**
- Small Water System (SWS), Small Wastewater System (SWWS), Building Water System (BWS) – **1.2 CEUs**
- Levels I-IV – **2.4 CEUs**

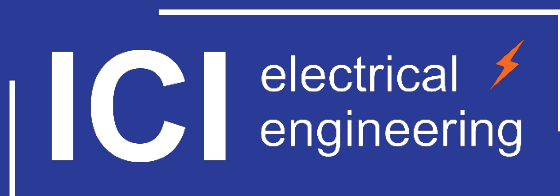
As specified in our Fall 2020 Digest, the EOCP has NOT changed its requirements for CEUs during this pandemic for several reasons:

1. Continuing professional development is a fundamental tenet of Operator certification throughout North America, and many professions are moving towards the model of mandating ongoing professional development;
2. There is still adequate time remaining in this reporting period to complete your CEU requirements;
3. Some training providers have had distance learning options for many years;

4. Many training providers have adapted to our new reality and provide virtual training and/or training in person with COVID-19 safety protocols;
5. The EOCP and other organizations have annual conferences that also provide opportunities to learn and accumulate CEUs.

If you have questions about your specific circumstance and requirements, please contact the office at eocp@eocp.ca and we are happy to help!

Happy Course Hunting!



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WHO'S ON THE MOVE

Randy Colombo

CWP CWWP

By Kalpna Solanki CPHI(C) BSc MBA

Randy has been a stalwart supporter of the EOCP. On a recent visit, I had the opportunity to chat with him about his more than 30 years as an EOCP certified Operator.

What was your first job? My very first job was with Coquitlam Parks Department in August 1981. My role was to plant bulbs, cut grass, work on sports fields, take care of outdoor pools, etc.

How did you pivot from that to becoming an Operator? I was always interested in working in the water department, and doing something more mechanical, but there weren't any vacancies. Seven and a half years later, an opportunity arose. I started working where I wanted to!

When did you first start working as an Operator? I continued working with Coquitlam, and became a certified Water Distribution Operator in 1991. I then also took a five-day 'Operator School' course at UBC and learned about sewers, and pump stations, ultimately getting my Wastewater Collection certification later in 1991.

What were some challenges along the way? Learning how to work with a variety of people, there are some different personalities you have to learn to work with! There were also challenges related to working with a variety of systems, learning how they function, and learning how to do repairs, and SCADA was just beginning!



How did you overcome those challenges? Keeping a daily log was really helpful. It helped with absorption of the information, but also provided a reference on how I dealt with different issues.

Ongoing education was also incredibly helpful. I took many BCIT courses over the years, and those were essential.

Talking to peers was also always informative, and recognizing that many of them knew more about aspects of the job than me. An example is Louise from Pacific Flow Control who taught me how to do my first line stop on a 350mm sewer force main!

On your retirement, what do you think you will miss about being an Operator? I will miss the challenges that help 'exercise' the brain. Also, the opportunity to work with something different almost every day. I will also miss working with the highly qualified management team at the City of Coquitlam, as well as the friends I made while working there.

What advice would you give to someone who is contemplating becoming an Operator? Listen, and learn everything you can. Always take advantage of educational opportunities. Keep a daily log. Never be afraid to take on anything.

Any notable projects or situations you would care to share? I have been working with the Trans Mountain Pipeline project for a while, and that has been fascinating. The size of the project, the safety protocols, and the type of work is incredible. Although, this is to transport oil, the skills from being in water/wastewater are completely transferable – it's transport, the product is different.

I was responsible for maintaining a methane protection system at the Coquitlam Landfill which is a 97,000 hectares site with an industrial park on top of it. The landfill comprises of 900,000 tons of wood waste with a clay cap and utilities on top. To ensure methane levels do not get to explosive levels, there are 72 manholes that are monitored every month for gases such as O₂, CH₄, H₂S, and CO₂. The results are logged.

In 2005, one of the manholes had methane at explosive levels, and it took 17 days to bring down the methane to safer levels. Once narrowed down to a small area, I installed a methane collector to vent the gases. The venting resulted in the methane levels going from explosive levels to safer levels after 17 days of venting. Over the past 16 years, five more vents have been installed.

What are your plans on retirement? I expect to continue working 2-3 days per week to keep my brain challenged! However, I am also planning on taking more vacations to Las Vegas, Santa Fe, and in general spend more time exploring AZ, NV, and NM.

ENVIRONMENTAL OPERATOR TRAINING

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STATISTICS

1st April to 30th June 2021



EOCP

Environmental Operators
Certification Program

EXAM STATISTICS



289 exams
taken

115 exam
sessions

FACILITIES



108 facilities
re/classified

CONTINUING EDUCATION UNITS (CEUs)

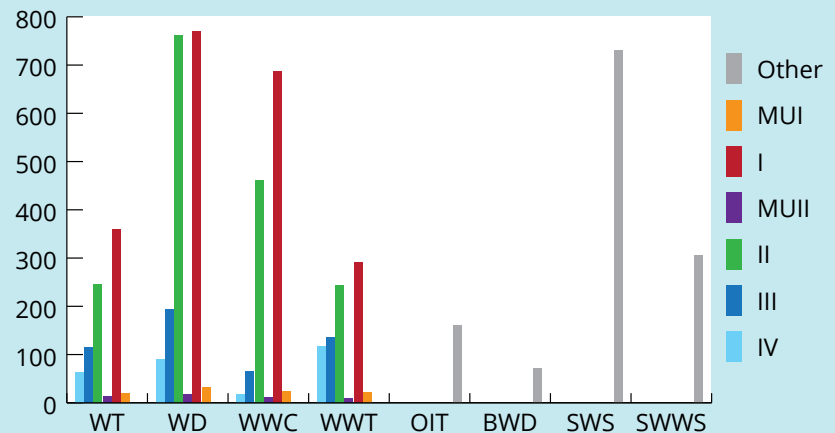
728 Operators
submitted CEUs

1,731 CEUs were
earned

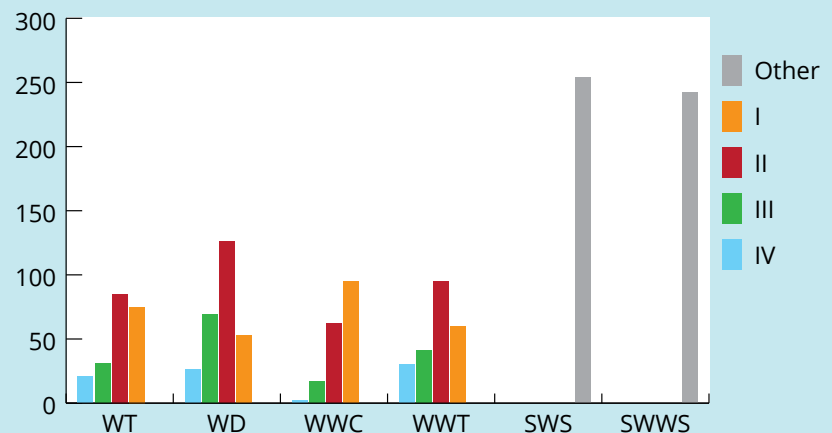
DEFINITIONS

WT	Water Treatment
WD	Water Distribution
WWC	Wastewater Collection
WWT	Wastewater Treatment
OIT	Operator In Training
BWD	Bulk Water Delivery
SWS	Small Water System
SWWS	Small Wastewater System
MU	Multi Utility

Operator Certification (April 1– June 30 2021)



Facility Certification (April 1– June 30 2021)



The CEU reporting period ends December 31st. Please make sure to submit your course certificates. Check your Operator status by logging into your profile at <https://crm.eocp.ca/> and clicking on **ACCOUNT** to see if your 2021 dues have been paid, and **CEU** under the LEARNING STATUS tab to see if your CEUs have been met.

If your CEUs have not been met for the 2018-2019 reporting period, or your 2021 dues have not been paid your status will be red flagged and you will be listed as not certified.

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INSTRUCTOR-LED VIRTUAL

To address the restrictions in place due to the pandemic, the BCWWA education team has converted our instructor-led classes to a virtual classroom format. These courses are delivered by a live instructor in real-time and they run for the same length and time that would occur in a physical classroom.

FALL SERIES

September 9 - December 14, 2021

- Dam Safety Management
- Unidirectional Flushing
- Water Treatment 3-4
- New Sector Professionals
- Source Water Protection
- Chlorine Handling
- Dam Inspection and Maintenance
- Reservoir Maintenance and Cleaning
- UV Disinfection
- Communication and Financial Skills
- Wastewater Collection 2
- Introduction to Hydrogeology and Groundwater Management
- Wastewater Treatment 2
- Water Quality and Sampling (for both water and wastewater systems)
- Leak Detection
- Preventing Waterborne Illness
- Introduction to Supervisory and Leadership Skills

ONLINE

This is the most cost effective and flexible way to prepare for your certification – at your own pace. You gain the same knowledge as the in-class course and earn the same CEUs. Even though courses are online, you will be assisted by an instructor to ensure that you have the help you need.

FALL SERIES

July 5 - September 30, 2021

- Water Treatment 1
- Water Distribution 1
- Water Distribution 2
- Wastewater Collection 1
- Wastewater Treatment 1
- Small Water Systems
- Small Wastewater Systems

CONTINUOUS ENROLLMENT

- Chlorine Handling Refresher
- Hypochlorination

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