

OPERATOR DIGEST

WINTER 2021 | NUMBER 147



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

PLANT PROFILE

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A new secondary
wastewater treatment
facility was completed
in 2016, and a new water
treatment facility came
online in July, 2020.

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A career is a
journey,
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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 inquiries about the program should be addressed to:

Environmental Operators Certification Program

201 – 3833 Henning Drive,
Burnaby, BC V5C 6N5

PHONE: 604 874 4784

FAX: 604 874 4794

TOLL FREE: 1 866 552 3627

EMAIL: eocp@eocp.ca

WEB: www.eocp.ca

FACEBOOK: EOCPBCY

TWITTER: @EOCPBCY

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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.

Staff

Kalpna Solanki, President and CEO
ksolanki@eocp.ca

Kim Eames, Office Manager
keames@eocp.ca

Jenni Green, Technical Expert
jgreen@eocp.ca

Stephanie Hall, Exam Co-ordinator
shall@eocp.ca

Heather Reynolds, Program Assistant,
hreynolds@eocp.ca

Lachlan Manser, Program Assistant
lmanser@eocp.ca

Board of Directors

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Krista Derrickson, Chair Elect
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OPERATOR PROFILE

Victor Cai

Level IV Operator, Ladysmith

How did you become an Operator?

Human beings cannot live without air and water. In order to live healthy lives, we need workers and industry systems to guarantee water quality for the public. Water and wastewater operation is a sustainable career. I decided to become a water and wastewater Operator based on my full confidence and interest in this industry and that was the best decision I have ever made.

How long have you been an Operator?

In 2010, I went to SAIT in Calgary for the water and wastewater technician diploma program and I had an Operator job before we finished the program. I attended the school in the morning and worked in the plant in the afternoons for my second semester. I have been working as a water and wastewater Operator for the last 10 years. I spent most of my time operating water and wastewater plants in the north. I was working in different types of plants for more experience and exposure to new technology, and to make myself gain comprehensive knowledge and develop troubleshooting skills. The more I learn, the humbler I am when looking at my job.

What are your core functions? A good Operator should be the spirit of the plant. Engineers design the plant, the construction team builds the plant, after that the plant is handed to the Operators. On the first day of commissioning the plant, Operators give the new plant a life. I have this new job working for the Town of Ladysmith to commission and operate a new Level IV DAF plus microfiltration water treatment plant since March of 2020. I am mainly responsible for chemical dosage set up, processing control, and daily safe, efficient, and consistent operation of the plant.

What is your typical day? My typical day starts with a good morning tool box meeting. People from different departments gather and give a brief presentation of daily activities. From the meeting you learn what is going on for the whole public works system. As a plant Operator, I spend most of my day checking equipment, instrumentation, and testing water quality to ensure plant is under normal operation. I believe most of the plant alarm call outs are preventable. I would rather be proactive than wait for something to surprise me.



What do you most enjoy about the work?

I am a newcomer to Vancouver Island. I appreciate the trust from both the management and operation teams in assigning me responsibilities for running the new water treatment plant for the Town of Ladysmith. I love this new plant as much as I love my new home here. I enjoy everything I do for my work. Each plant has its own characteristics and I really like to spend time to find a way to match its character to run the plant more efficiently and consistently. For example, we have a very clean raw water source, but its alkalinity is very low, and the PH will go up and down quickly with the weather changes. It is very hard to make floats for our DAF system. To deal with this problem, I had to do hundreds of jar tests to find out the proper chemical dosage. It was a stressful process, but it was also a big achievement once I found a solution to solve it. With the right chemical set up, the plant was able to start commissioning and it has been working very well. The challenges and opportunities always go hand in hand. As an Operator, we face the challenges and seize opportunities which make us successful in our career.

What are some challenges you face?

Operators face different challenges every day. In 2016, there was a big forest fire which destroyed thousands of acres of

"Operator Profile" continued on page 11

MESSAGE FROM THE DIRECTORS AND STAFF



Chris Lawrence

Kalpna Solanki

Congratulations all around...we survived 2020, a year like no other!

Surprisingly, despite the pandemic, it was essentially 'business as usual' at the EOCPC, and although we lost some momentum in April, we more than made up for it during the remainder of the year. Working collaboratively, we navigated through pandemic restrictions, and managed to pivot as necessary to meet every one of our targets:

Looking at EOCPC by the numbers for 2020:

- More than 500 facilities re/classified
- More than 20 facilities preclassified
- 850 exam applications processed
- More than 280 exam sessions offered
- More than 830 exams written
- More than 100 jobs posted

The EOCPC supported the work of Metro Vancouver and BCIT in the development of a new program for Operators: [Associate Certificate in Fundamentals of Water and Wastewater Operations](#). The program launched on the 7th of January 2020 with a full cohort of 22 students.

Working together with the City of Vancouver and Vancouver Coastal Health, the EOCPC developed a new [Building Water Systems](#) certification. The EOCPC is currently accrediting courses related to this certification and the certification exams will be available in web-based and written formats by the end of Q1/2021.

A [Communication Project](#) that was started with the Ministry of Health and Health Authorities in 2018 continued and enabled even more facilities to be in compliance with the pertinent regulations.

Although the CRM has been in place for almost four years, to ensure all

stakeholders are up to date on the use of it, several webinars are available on a regular basis and the schedule can be viewed at the EOCPC's [Events Calendar](#). The webinars cover subjects such as:

- CRM Basics
- Exam Application
- Facility Classification

Despite the pandemic, we were able to hold elections and welcome to the board our new directors:

- Chris Kerman
- Ben Kineshanko
- Jim McQuarrie (returning for a second term)

Using the Operator Peer Network created in 2019, we were able to work with BC's Provincial Health Officer to develop a plan to provide assistance to any communities that may be affected by Operator absence due to COVID-19. This resulted in the dissemination of a memo from Dr. Bonnie Henry to all water suppliers.

- A new [Code of Ethics and Standards of Practice for Environmental Operators](#) encompassing best practices from several professional organizations was developed and implemented, and will be rolled-out more fully in 2021.

- Work continues on our facility classification models where we are working with various stakeholders on new models that better reflect the complexity of WWSs. We expect these will be rolled out within Q2/2021.

- **SAVE THE DATE:** Last but by no means least, we had tremendous feedback on our conference, #EOCP2020 – North America's first fully virtual conference for Operators - and we met our targets for number of delegates and revenues! You can view some of the presentations from #EOCP2020 at our [YouTube](#) channel. Plans are already underway for #EOCP2021, which we hope will be in a hybrid format (in-person and virtual). The theme for #EOCP2021 is 'Respond Recover Thrive' so please save the date: **13-15 September 2021** – we expect this one to be even better, and bigger! In the meantime, [meet our keynote, Eric!](#)

2020 was not easy, and we don't know what 2021 will bring. We know that there is no going back to our old 'normal'. We can only move forward. Let's step forward together. Let's keep moving.

Chris Lawrence, Board Chair
Kalpna Solanki, President and CEO

**EOCP TRADESHOW AND CONFERENCE**

13TH TO 15TH SEPTEMBER 2021

A HYBRID CONFERENCE
At the Marriott Pinnacle Hotel in Vancouver
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2021 CONFERENCE THEME
PROMOTE PROTECT EVOLVE



2020 VIRTUAL CONFERENCE FEEDBACK
“The EOCPC has this modern-day energy emitting from it. You're onto something really good with how you're doing business... Very happy to be part of this Team.”
“Keep up the great work and very slick delivery of this virtual conference.”
“This virtual conference has exceeded my expectations. It is very well done and easy to navigate!”
“The operators in my community enjoyed the conference and thank EOCPC for all its efforts.”

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WHAT'S NEW IN LADYSMITH

By Jenni Green, P.Eng

Special thanks to Chief Operator Mike Brown from the Town of Ladysmith

The Town of Ladysmith has been busy over the last five years. New Water and Wastewater Treatment Facilities have both come online since 2016 with the new Water Treatment Facility having been commissioned this past July.

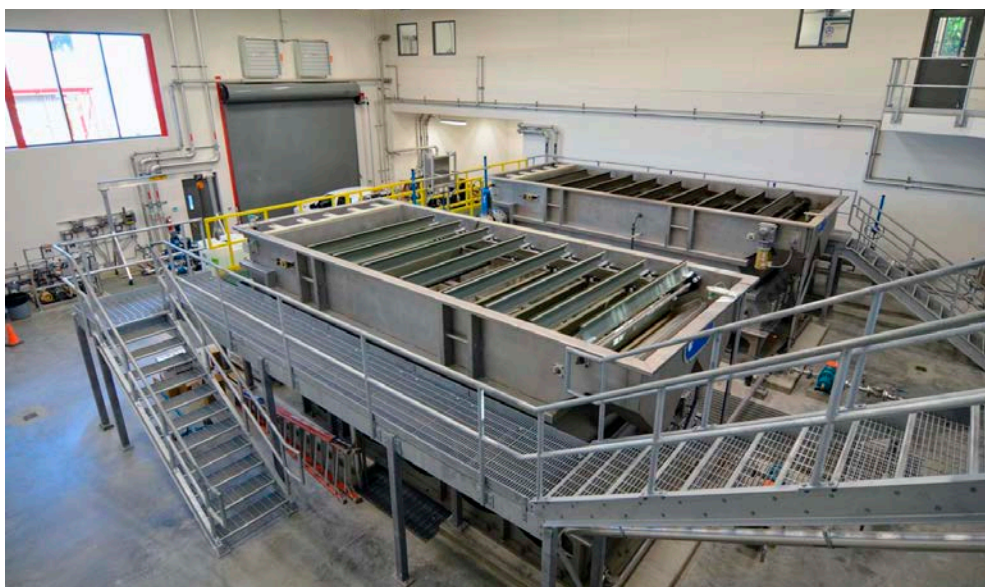
WASTEWATER TREATMENT

Ladysmith's original wastewater treatment plant was built in 1960 and consisted of a "Spirogestor" (essentially a clarifier) and chlorine contact tank. Due to population growth in Ladysmith, as well as increasingly stringent regulation of the receiving waters, Ladysmith completed a Liquid Waste Management Plan (LWMP) which led to the plant going through a three-stage upgrade. The LWMP can be found here:

<https://www.ladysmith.ca/discover-ladysmith/community-plans/liquid-waste-management-plan>

Ladysmith's WWTP discharges directly into an active shell fishery and therefore is regulated by a Conditional Management Plan (CMP) in addition to MOE permit requirements. This CMP sets out effluent requirements in conjunction with CFIA, DFO, ECCO, and MOE, and a structure to close and open the fishery in the event of plant bypasses or failures.

In 2016 the secondary treatment portion of the WWTP went online, completing the three-stage upgrade. This increased



Inside the new WWTP

Ladysmith's ability to treat wastewater drastically. The effluent design specs for the new facility are:

- 15mg/l average BOD (biochemical oxygen demand) and TSS (total suspended solids)
- 25 mg/l maximum BOD and TSS
- increase of capacity to 14400 m³/day

Prior to secondary treatment the Ladysmith WWTP could not maintain its existing MOE permit of 130 mg/l BOD and 130 mg/l TSS, and frequently bypassed treatment due to rain events. Since 2018 the plant has exceeded the design specs for effluent quality, with both TSS and BOD averaging less than 15mg/l. The facility now consists of:

Primary treatment

- Auger screens
- Grit vortex and washer
- Salsnes filters (500 micron)

Secondary Treatment

- MBBR (moving bed biofilm reactor)
- DAF (dissolved air flotation)

Disinfection

- Sodium hypochlorite injected at chlorine contact tank
- Calcium thiosulfate injected after contact tank

Sludge Handling

- Sludge is stored in two separate holding tanks, one for primary and one for secondary
- The two sludges are mixed prior to dewatering via centrifuge
- Dewatered sludge is then taken to our compost facility

The fundamental difference in the new wastewater facility is the design of the moving bed biofilm reactor (MBBR) and dissolved air flotation (DAF) systems. With MBBR technology microorganisms

grow on media, creating zones of higher dissolved oxygen (DO) near the outside and lower in the center. This helps with growing a diverse population of microorganisms. When growth exceeds the surface area of the media, the floc is simply sloughed off where it is picked up by the DAF. This design eliminates the constant need to adjust return activated sludge (RAS) and waste activated sludge (WAS) rates, and to test mixed liquor suspended solids (MLSS) as would be necessary in a more conventional activated sludge plant. The other benefit to the MBBR is its resilience to changing influent BOD loading. Ladysmith has a considerable amount of inflow and infiltration (I&I) and can see surges that exceed five times the dry weather flow during heavy rain events. To date, the MBBR has been able to maintain treatment after these events of cold, low BOD influent flows, without the need for a significant period of regrowth or seeding.

The Town is also in the midst of completing a UV pilot project at the WWTP. This was recommended as part of the LWMP and fueled by a need to eliminate or reduce the amount of Norovirus in the effluent that can infect shellfish in the receiving waters. If successful, UV will replace the current chlorination/de-chlorination disinfection system. The town worked with our WSP consulting engineers, and Tim Green from Vancouver Island University (VIU) on the pilot. Because Norovirus can't be tested for directly, samples must be tested for indicators called Male Specific Coliphage (MSC). VIU was able to work with the Town to complete this testing, as no lab in BC tests for this parameter. Samples were taken by Operators and stored in a portable freezer at -80°C, then sent to VIU for lab testing.

Challenges

The biggest challenge Operators running the new system have faced is maintaining the Salsnes filters. While they do an excellent job in TSS reduction and have a very small footprint, they require a great deal of maintenance. Moving sludge from the filters to the holding tank can be troublesome. Screw pumps pump the sludge (3-4% solids) through 4" stainless piping from the Salsnes building underground to the sludge holding tanks. High amounts of grease in the sludge combined with colder weather cause frequent backups, and constant maintenance using high pressure heated water is needed.

The facility and its design engineers, WSP received a Canadian Consulting Engineering Award for Excellence in 2018.

WATER TREATMENT



New Arbutus Water Treatment Facility during construction

The Town of Ladysmith was required to upgrade its water treatment facility to meet the filtration standards of the BC Surface Water Treatment Objectives. After two years of construction, The Arbutus Water Treatment Plant was commissioned in July of 2020.

Source water flows to the plant from two water sources, Holland Lake and Stocking Lake. Upon entering the plant, water is fed through coarse (5mm) and fine (500 micron) screens with automatic backwash function, then through a flow control valve. After this, soda ash and poly-aluminum chloride are injected, and water then enters the rapid mixing chamber. After rapid mixing, flow is branched into two trains, each consisting of slow mixing flocculation chambers, then Dissolved Air Flotation (DAF) tanks. The chemically assisted DAF process is purposed to remove dissolved organics, that when reacting with chlorine disinfection, create Trihalomethanes (THMs) and Haloacetic Acids (HAAs). Waste from the DAF flows into two residual tanks that

buffer effluent flow into the wastewater collection system, and ultimately to the wastewater treatment plant.

After DAF treatment, flow passes over a weir and into the buffer tank. From here it is pumped through the membranes. The membranes are GE/Suez ZeeWeed 1500 series and provide ultrafiltration with a 0.02 micron pore size. They are staged in three trains, with one train running during winter flows and two trains running during summer flows. Membrane permeate is disinfected using chlorine gas and then pumped into a 5700 m³ reservoir. The chlorine gas system was in place prior to construction and is scheduled to be replaced with a sodium hypochlorite system in March of 2021.

Water treatment objectives achieved by the new facility are as follows:

- Turbidity < 0.1 NTU in 99% of the measurements taken, and < 0.3 NTU at all times.

"Ladysmith" continued on page 7

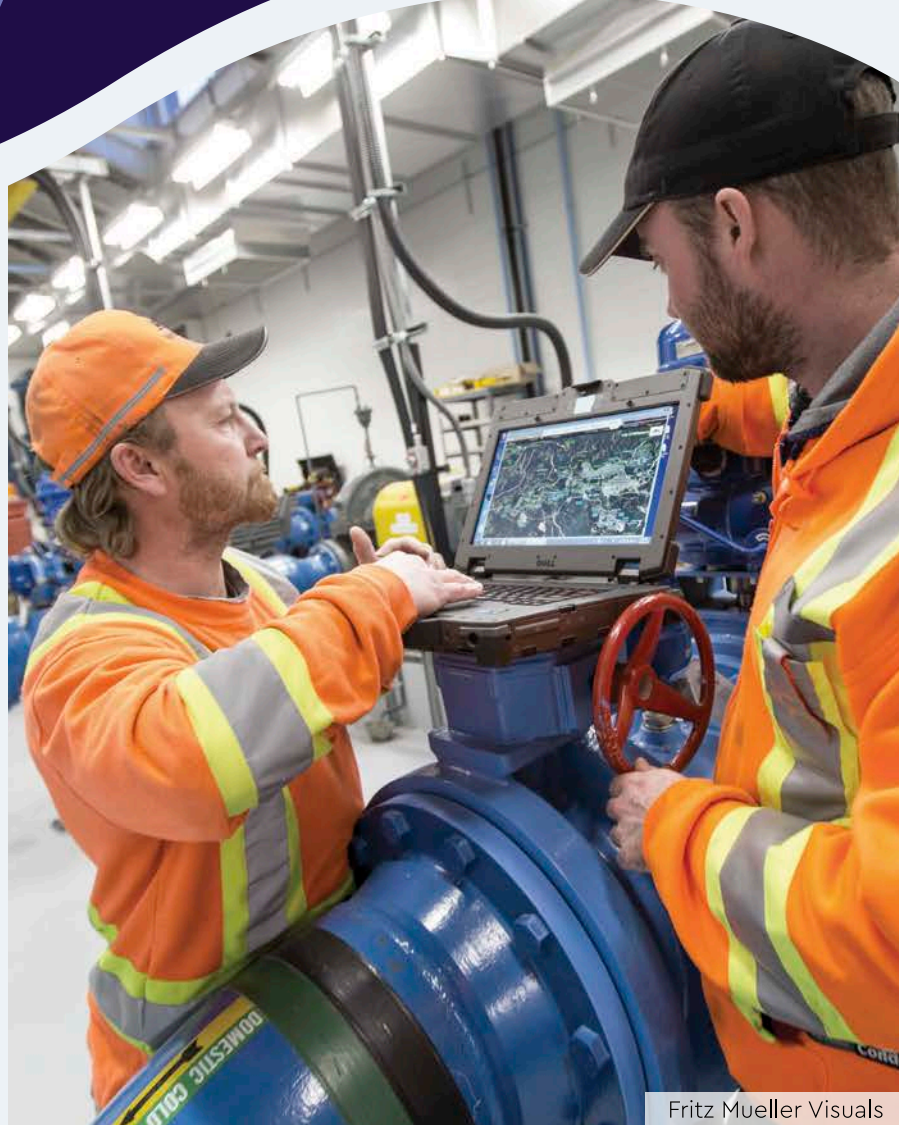


Membranes being installed at the new facility

Operator training, close to home



you work in a small community
your training should too



Fritz Mueller Visuals

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"Ladysmith" continued from page 5

- Minimum 4-log removal or inactivation of viruses.
- Minimum 3-log removal or inactivation of *Cryptosporidium parvum* and *Giardia lamblia*.
- Removal of true colour to below the aesthetic objective of < 15 TCU.
- Reduction of DBPs to less than the GCDWQ operational objectives.
- Limit the increase in total aluminum concentrations due to treatment to < 0.100 mg/L from incoming raw water concentrations.
- Maintain a minimum 0.2 mg/L free chlorine residual throughout the distribution system.

Currently the treatment facility can supply the projected 10-year design demand of 132 L/s (125 L/s net after losses due to membrane cleaning and backwashing), and has been designed to accommodate expansion to meet the 20-year design demand 164 L/s (156 L/s net)

Challenges

The process from design to construction was met with major delays throughout. COVID-19 only amplified this when it hit in March of 2020. The unprecedented new reality made for a very interesting commissioning period. Hard work by all involved prevailed and the Town has been producing excellent water quality from day one. The biggest challenge to date from an operations perspective has been keeping the pH in the treated water at a level that doesn't impact the distribution system. With soda ash injection prior to the DAF, dosing must be in a range that accommodates healthy floc formation in conjunction with poly aluminum chloride (PACl) addition. Therefore, the raw water pH adjustment from soda ash injection is really only intended to increase alkalinity and buffer PACl addition. A new soda ash injection point was added on the membrane permeate line and Operators are now able to have full control of treated water pH. The operations team is in the process of adjusting pH to 7.2, from 6.5 range, in hopes of mitigating the myriad of water service leaks that have occurred in the distribution system since completion of the new plant.

The Suez membrane system's performance has been near flawless. Combined with the Insight online monitoring program, Operators are able to track membrane performance with ease.

KALPNA SOLANKI, President and CEO of the Environmental Operators Certification Program, Recognized with Prestigious International Award.

By Kim Eames

Kalpna Solanki was recognized by the Association of Boards of Certification (ABC) and received the Robert C. McAnespie Outstanding Certification Officer Award at its 2021 Virtual Conference in January.

The Robert C. McAnespie Outstanding Certification Officer Award is presented to a member certification officer in recognition of outstanding contribution toward establishing or advancing certification.

Kalpna has been President and CEO of the EOCP for five years and in that time has contributed successful approaches in leadership and innovation. These contributions are of lasting value and some examples of her work are included.

In November 2017, the EOCP CRM was introduced. The system is compliant with FOIPPA requirements and links classification, certification, billing, and career management. Applications for certification and classifications are now completed online, all courses assessed by the EOCP are available and sortable with links to the training providers, it includes automatic billing and records management.

After Kalpna surveyed the EOCP membership to see what they wanted most, the EOCP held its first conference for Operators in 2018, and as of 2020 is now an annual event. In 2020 EOCP was the first in the industry to host a virtual conference with great success.

EOCP uses the latest version of the ABC standardized exams and offers more sessions annually than any other jurisdiction in Canada. COVID-19 safety protocols have been put in place to ensure the safety of EOCP staff and Operators writing their exams.

EOCP worked with the City of Vancouver and Coastal Health in response to concerns about Legionella and other water borne illnesses with sources that include cooling towers, swimming pools, domestic water systems, and fountains. A need-to-know criteria was developed and a new certification, Building Water Systems (BWS) was created. Kalpna reached out to training providers who have assessed courses in the CRM, and



several have developed training based on the need-to-know criteria. BWS certification exams can be written as of January 2021.

An Operator Peer Network was created and Kalpna worked with those who signed up to match mentors with mentees. COVID-19 introduced another side to the Peer Network. Kalpna asked for volunteers and over 50 Operators are making themselves available to communities that have been affected by the pandemic. Many communities have included the Operator Peer Network as part of their emergency response plan.

Kalpna connected Metro Vancouver and BCIT to develop a water and wastewater program in the lower mainland. As part of the sector advisory group, she was able to provide BCIT with contacts from the EOCP subject matter experts who aided in the development of the courses being offered in the program. The first cohort of 22 in the pilot class started on January 7, 2021.

With retirements and the 'silver tsunami' hitting the Operator workforce in BC and Yukon, Kalpna reached out to the Credentialing Assessment Improvement Fund with an idea to create an online self-assessment tool where credentials can be entered to determine if newcomers have the required education and experience to write EOCP certification exams. This can attract new people to the industry to help increase the pool of certified Operators for municipalities.

THE VALUE OF A CO-OP

By Holly Stevens and
Cassandra McFarland

Students and recent graduates are often faced with the Catch 22 of not being able to find a job because they lack experience, and not being able to obtain experience because they are unable to find a job. This can be very discouraging for students who are eager to enter the workforce to utilize their newly certified skillset.

Students at Okanagan College have the opportunity to combat this situation by applying to the College's Co-Op program. The Student, Graduate and Co-Op Employment Centre works closely with employers across the Okanagan region to provide practical and relevant job opportunities for students. Students from the College's Water Engineering Technologies (WET) program use this opportunity to gain valuable job experience and earn their EOCP certification.

To share what the Co-Op experience has been like for both students and employers, we took the opportunity to chat with OC WET students Eric Marshall and Tyler Wilkie as well as Mike Gosselin with the City of Kelowna and Willyam Dragon and Andrew Hunt with Metro Vancouver.

STUDENT PROFILES

Eric Marshall

- Current OC WET student
- Metro Vancouver | Iona Island Wastewater Treatment Plant Co-Op student

What made you decide to take part in Co-op? What did you like best about it?

I wanted to further my knowledge in the water treatment industry while earning income to support my education. I liked the independence of the work and the ability to apply the knowledge I've learned.

What were your first couple of months like on the job? I began the position



Okanagan College WET Student, Tyler Wilkie, collecting samples to assess the effectiveness of different types of filtration systems

completing general maintenance tasks such as weed eating, painting and safety inspections while also completing several training courses. I then began to shadow Operators for daily process rounds and sampling. As I got more comfortable in the operations, I worked with other Operators on lockouts and was introduced to additional tasks including pump calibrations and flushing.

What has been the most beneficial thing you have learned while in your co-op?

This opportunity has taught me what the work environment at a large industrial plant is like. Before Co-op, I didn't realize the extent of careers I could work towards or what it would be like to be a Wastewater Operator.

What advice would you give to someone considering doing a co-op?

With the right Co-op experience, the connections you will make are invaluable.

Tyler Wilkie

- OC WET graduate (December 2020)
- City of Kelowna | Wastewater Facility Co-Op student

What work did you do at the City of Kelowna?

As a summer co-op student, I mainly did operations around the plant. I completed daily operations which includes checks, centrifuge confined space entries, lab testing and lift-stations.

What made you decide to take part in a co-op work term(s)?

I took part in co-op work terms because it allowed me to get the industry experience needed to obtain certification and help land employment after my education.

What were your first couple of months like on the job?

The first couple of months were amazing. I was able to shadow some of the best and most helpful operators every day for the first month or so. This involved working directly with them for repairs, checks, testing and various other things.

Has participating in a co-op helped lead you to your EOCP Certification?

Yes, I was able to write my EOCP Wastewater Treatment I based solely on the fact I had enough hours through all my co-op terms.

EMPLOYER PROFILES

Mike Gosselin

• City of Kelowna | Wastewater Operations Manager

How long have you been with the City of Kelowna and how many Co-Op students have you worked with?

I have been with the City of Kelowna for 29 years and have worked with around 30 Co-op students.

What do you like best about working with co-op students? It's such a pleasure to work with students who have worked so hard in school and are eager to put some of their knowledge to use in a real-world setting.

What do you do to ensure the success of a co-op student? The wastewater treatment groups try to provide students with exposure to all aspects of a full-time position. This is also beneficial to the organization as Co-op students have been able to fill gaps due to staffing absences.

What has been the most beneficial thing you've learned while having co-op students on your team? With co-ops entering our work force directly from school, they bring with them a wealth of knowledge that has not been limited to one view or a long-standing way of performing a task. They bring with them an opportunity for us all to take a step back and review how some tasks are completed.

What advice would you give students who are considering doing a co-op? You are joining an established team that has a wealth of experience, so come to work every day with an open mind and a willingness to join the team. There is much to learned from every staff member.

Willyam Dragon

• Metro Vancouver | Superintendent, Water Services, Water Treatment – Coquitlam Water Treatment Plant & Rechlorination

How long have you been with Metro Vancouver and how many co-op students have you worked with? I have been with Metro Vancouver for 14 years and worked with approximately 20 Co-op students

What do you like best about working with co-op students? These students show considerable enthusiasm and have a great willingness to learn the different aspects of the work.

What do you do to ensure the success of a co-op student? For the first month, the co-op student's main focus is on site safety (i.e. CSE, TDG, OFA 1, WHMIS, SCBA), site orientation and in-house Metro Vancouver web-based training. The student shadows an operator to learn all the aspects of the water treatment plant and is exposed to various operational scenarios. We have an excellent Operations team that are always eager to pass on their knowledge and expertise.

What has been the most beneficial thing you've learned while having co-op students on your team? The ability to effectively contribute to the Team using "state of knowledge" information gained in the Water Engineering Technology Program.

What advice would you give to other employers who are considering offering co-op work opportunities? It's an opportunity for your organization to develop future employees and future leaders.

What advice would you give students who are considering doing a co-op? When graduating from the college, work experience gained from a co-op assignment can give you an edge in "hands-on experience" and confidence for your future career in Water Treatment.

Can students use the hours they complete during their co-op towards their EOCP Certification? Yes, the students are able to use the hours worked towards their EOCP certification. We ensure that the tasks assigned are meaningful and in-line with the EOCP requirements for obtaining their EOCP certification.

Would you recommend co-op to other employers? I would highly recommend hiring a co-op student to other employers, as it has been an excellent recruitment tool for Metro Vancouver.

Andrew Hunt

• Metro Vancouver | Superintendent – Iona Island Wastewater Treatment Plant

How long have you been with Metro Vancouver and how many co-op students have you worked with? I've been with Metro Vancouver for 29 years and have worked with around 50 co-op students. I actually started as a Co-Op student myself! After completing two Co-Op terms I was offered a job immediately

after graduation. The Co-Op experience worked very well for me as someone looking to start out in the industry. Now, I have the vantage point to see how beneficial the system is for the employer as well.

What do you like best about working with co-op students? Their enthusiasm, having a variety of talent brought to the table and adding in fresh "new blood" to mix with the old!

What do you do to ensure the success of a co-op student? We make sure students have a proper orientation, are actively involved and have clear direction. We also ensure they have adequate technical and safety training. Metro Vancouver has solid training opportunities – we really push it to the next level and make sure we have new students signed up for what they need to be successful by the day they start their co-op.

What advice would you give to other employers who are considering offering co-op work opportunities? Recruit as early as possible before the co-op terms start – you can get the best and brightest this way.

What advice would you give students who are considering doing a co-op? Learn as much as possible, be enthusiastic, be professional and have fun too!

Would you recommend co-op to other employers? YES. It is essential to succession development. We need them as much as they need us. For example, we have a co-op student who is getting great feedback and comments. We know we want to try and get him back and continue developing him next summer if it is the path he chooses.

We have another three female students who wowed us in their interviews and have been incredible since they started. They are impressive both as students and employees. They are breaking down all the walls down for women entering the field.

We also have an employee who started with us as a Co-op student through the OK College program and he is now a Charge Hand. I can sleep peacefully at night knowing he is in charge at the plant. Interestingly, his sister has also become a Metro Vancouver employee through the same program and has done incredibly well – she is now a supervisor in water services.

WRITING AN EXAM DURING COVID-19

By Stephanie Hall

Is the EOCP Currently Providing Exam Sessions?

Yes! The EOCP is one of only a very small handful of organizations in North America that has strived to accommodate Operators' exam requests – not an easy task during a pandemic! Though locations are limited during this time, the EOCP team has been determined to provide exam sessions throughout British Columbia and Yukon.

In 2020 a whopping 279 exam sessions were provided – more than in any previous year!

What Are the Safety Precautions in Place for Exam Sessions?

The EOCP has a COVID-19 Safety Plan based on WorkSafe BC guidelines for exam sessions at the EOCP office and other locations. These protocols include, but are not limited to:

1. Operators are not to attend if they are ill
2. Physical distancing of two metres apart
3. Reduced room capacity so fewer Operators are writing at the same time
4. Use of hand sanitizer upon entering the facility and when leaving
5. Wearing a mask that covers both the nose and mouth for the duration of the visit to the exam location
6. Avoiding touching of eyes, nose, and mouth
7. Tables, chairs, devices, lockers, and other contact surfaces are sanitized after each exam session
8. New or sanitized laminated formula sheets are provided for each Operator
9. HEPA/UV-C air filters are in use at the EOCP office
10. One-way traffic flow system at exam locations

Will Exam Results Be Delayed Due To COVID-19?

Exam breakdown for web-based/paper exams continue to be provided within 10 business days.

1. Once the EOCP receives results, your mark is entered into the CRM for your review indicating 'Pass' or 'Fail'
2. A result/breakdown letter is sent to you via the email address provided in your CRM profile
3. The certificate can be printed by you from your profile, and a hard copy of the certificate will be mailed to you the month following your exam

Feedback from Operators Who Recently Wrote Exams

I felt safe writing my exam. Thank you! - *John*

Thank you EOCP for your organization and making a session happen during the pandemic. I know there are logistics involved. I felt comfortable writing my exam. – *Andrew*

EOCP was helpful in arranging a session which worked with the limited ferry crossings. – *James*

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PROPERLY



Cover mouth and nose with mask and make sure there are no gaps between your face and the mask



don't pull below
the nose



don't leave your
chin exposed



don't pull below
chin



don't touch
the mask



don't wear loose
mask



don't wear a dirty
or wet mask

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"Operator Profile" continued from page 2

land in the Fort McMurray area, during this, I took charge and ran the Level III ActiFlo water treatment plant located 49 km north of Fort McMurray. It was the only continuously operating large treatment plant producing portable water for firefighters, rescue teams and workers during the big fire. I faced the big challenge to treat a highly polluted raw water source which was caused by burning ashes, falling trees, and the spring runoff. In 2018, I worked for EPCOR and commissioned the TECK West line creek industrial Level IV selenium removal wastewater treatment plant. This was one of the most complicated treatment plants in North America and it was the first model built in Canada. It was a challenge for everyone working in that plant to try to keep it continuously working efficiently without breaking down.

What advice do you have on how to have a successful career as an Operator? As an Operator, we should have a sense of honour and responsibility for what we are doing. I recommend that Operators take the opportunity to operate and gain experience in different types of plants. It is important to build strong knowledge by troubleshooting the real problems. Theory should be combined with practice and never should a worker just talk the talk. Good teamwork is key to success as well. Trying to understand and help others from different departments will make our work much easier.

What do you do when you aren't working? I am a typical family guy and I spend most quality time with my family if I am not working. I like traveling and my holidays are always on the road. We first visited Vancouver island a year ago. My wife and my son loved this place so much and they hoped to have a home on the island. I used to do shift work and was so busy with my job, I was never home. I felt it was time for me to settle down. With my new job, my family moved from

Calgary to the island. I am full of gratitude and happiness to be together with my family after work every day.

What else can you tell us about working as an Environmental Operator? Operators work to protect the environment and maintain healthy lifestyles for families. The companies they are working for are the foundation of every employee's happiness. The prosperity of companies will not only promote the development of environmental protection but also benefit every employee's family. They will hire more people, have more yearend bonuses and create more programs to help children and seniors. Thus each staff member, regardless of the ability and position, must unite as one to strengthen the business of the company.

Whom would you recognize as a mentor? I actually had two mentors who impacted me profoundly. Doug Haase, my first mentor, brought me into the operation field. My first operational job

started in his plant. Doug was a very knowledgeable team leader and one of the first few certified Level IV Operators in Alberta 10 years ago. He said "Just go and do what you think is right, don't be afraid of making mistakes as we can always fix it together." He was my best technical support and his encouragement gave me confidence to do my job. My second mentor's name is Jeffery Hume. I met him when I had the job to commission a new Level III water treatment plant for CIVEO. He was my supervisor and we faced a tight timeline and lots of challenges to get the plant started. Jeffery was very strict on the job and I remember on my first day he told me "I can only give three days to help you learn this plant, after that you will be on your own, and if you can't figure it out by that time, you are not good for this job." His words always pushed me to work hard. I worked with him and successfully commissioned the plant on time. These two mentors, who were so different in character, are people I will never forget.



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A career is a journey,
not a destination.

ONE OPERATOR'S JOURNEY

By Kalpna Solanki BSc CPHI(C) MBA

WHO'S ON THE MOVE

Ravi Chhina

EOCP Certified General Manager,
BCIT's new Operator program



I had been working with Metro Vancouver's HR and Corporate Services group on BCIT's new Operator program, when I found out that the new General Manager for the group is an EOC certified Operator. Of course, I had to find out more, and armed with a list of questions, I had the opportunity to interview the new GM, Ravi Chhina.

What was your first job?

My first job in Publics Works was in 1994 with the City of Vancouver as a Water Operations labourer.

What was your path to becoming an Operator?

I had gone to trades school at Vancouver Community College and then started in the industry when I started working in 1994. In 1997 I achieved my first certification as a Water Distribution Level I Operator, and I worked for Vancouver for 20 years. Along the way, I gained my WD Level II and WWC Level I certifications. I really enjoyed the work – operations is fascinating and important, meaningful work.

In 2012, I left Vancouver for a more senior role, that of Manager of Engineering with Port Coquitlam. At this time, I also got my WD Level III and WWC Level II.

I then moved to Metro Vancouver in 2014 as the Superintendent of Water Transmission Operations.

How did you pivot from your last position to your current one?

In 2016, I was hired as Director for the Metro Vancouver Housing Corporation, a position in which I was able to use my transferable skills related to operations and building maintenance. The

transferable skills I learned during my time in utility operations were invaluable. This position led to being promoted in 2018 to General Manager of Regional Parks and Housing Services, as a member of Metro Vancouver's executive team.

When Jerry Dobrovolsky took over as CAO at Metro Vancouver, I moved to a temporary role as General Manager of Water Services. After 6 months in that role, in May 2020, I took on the role of General Manager of Human Resources and Corporate Services for Metro Vancouver.

While my career path is a bit different from that of many in HR, Metro Vancouver has 1,800 employees, the majority of whom work in water and wastewater services. In my role, I have the inside knowledge – I have done the work.

I do feel that I have now landed and enjoy my new role. Although I am no longer developing and building in the field, I am working on developing and building the culture of the organization. My career path has slightly changed, however, I see the value in my EOC certifications and will be maintaining my WD and WWC certifications.

What advice would you give to someone who is currently an Operator or considering becoming one?

Go for it! I could not have asked for more when it comes to the career I have had. The world of water and wastewater is incredible. I have learned so much, and even in my current role, which is less

operations focused, I take these learnings and experiences with me everywhere – they have given me such a rich foundation.

I honestly do not think I would have progressed in my career the same way if I did not have the experience I have had, with utility operations. My previous roles helped me understand our network, our region, and our organization in a deep way. Along my journey, I gained more and more transferable skills – the transferable skills from being an Operator are second to none. Along the way, there have been opportunities to hone my leadership, labour relations, contract negotiations, and recruitment skills.

What has the impact of COVID-19 been on your organization?

I am fortunate to be working with such dedicated staff in an awesome industry. Even during these trying times, staff find a way to continue to provide the region with high quality services. Water and wastewater are an essential service – we have to keep running. Being an Operator is a recession-proof career. Everyone in water and wastewater should take pride in the essential, critical services we provide.

What are some of your goals in your new position?

I would like to get the word out to the next generation, and future talent, about the career opportunities they have at organizations like ours, and that a career in the utilities is meaningful, fulfilling, and very rewarding.

SAVE THE DATE:

#EOCP2021: 13-15 September 2021



CONGRATULATIONS HEATHER!

Heather Reynolds celebrated 10 years at the EOCP last year and has seen numerous changes during that time. Here is her perspective!

How did you begin working at the EOCP?

Back in 2007, the first CEU Reporting period was coming to a close and there was a backlog of CEU entries that needed to be completed. The workload for CEUs was more than the staff at the time could address, so Barb Striegler (at that time the Office Manager at the EOCP), looked for a part-time person to provide assistance. At the same time, my godfather, Bill Hyslop, was the Executive Director of EOCP and told my father that there was a potential part-time position available. At the time, I had just turned 20 and was looking for work while I was attending college. In June 2007, I met with Barb and started working part-time before the Summer started.

From 2007 through to 2010, I took on more tasks, assisted the Office Staff wherever I could, and put in more hours. I also had a major part in the development of the original EOCP Training Registry. During these years, I obtained broad operational knowledge of the different aspects of the EOCP.

Then, in September 2010, the opportunity arose and I was offered a position as a full-time employee. I leaped at the chance!

What do you like about the work?

There are two main things that I like about the work:

1. The people that I get to work with - Operators, Training Providers, Administrators - everyone I get to work with within the industry is extraordinary. I can always count on the people I speak to on the phone or via email to bring a smile to my day.
2. The work is always different - each day, week, month, offers something new. As the industry changes and evolves, there is always something exciting around the corners. There has rarely been a day that I haven't looked forward to my work.

What changes have you seen in the industry and at the EOCP over the past 10 years?

At the EOCP, we have upgraded all of our administration systems: the old Access database to the Customer Relationship Manager, the Training Registry to the Career Management System, and our Accounting System - everything has had a major overhaul to streamline and speed up our processes. Now, what we see internally is communicated to stakeholders faster than at any other jurisdiction.

EOCP has added a new certification, Building Water Systems (BWS) - these systems need to be properly installed, routinely tested and maintained, and reported on, to ensure that corrective action takes place to help prevent outbreaks of Legionella. This certification also encompasses potable water systems where anti-corrosives are used.

I have seen an increase in the number of women in the Industry at all levels - operations, administration, and supervisory.


I have also seen a massive increase in the support between communities. Operators from larger communities assisting smaller communities with the EOCP's Operator Peer Network, as well as an increase in training and assistance for First Nations Operators.



The Environmental Operators Certification Program has also become a proud founding partner of Operators Without Borders and is happy to connect certified, volunteer water and wastewater Operators who can support utilities in developing countries following disaster situations to ensure that safe drinking water and wastewater management services are resumed.



Any thing else you would like to share?

The whole EOCP - the Board, the Staff, the Operators, and other stakeholders have been an extended family to me. On a personal level, I love to travel the province - and I have been able to ask Operators and Administrators for assistance or recommendations for local activities in my travels - it's like having a really big family that is spread out all over the province!

For the majority of the past year, I have been on Maternity Leave, and I am very much looking forward to returning to assist Operators, Employers, and Training Providers in 2021.


operatorswithoutborders.org






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STATISTICS

1st October to 31st December 2020



EOCP

Environmental Operators
Certification Program

EXAM STATISTICS



309 exams
taken

93 exam
sessions

FACILITIES



69 facilities
re/classified

CONTINUING EDUCATION UNITS (CEUs)

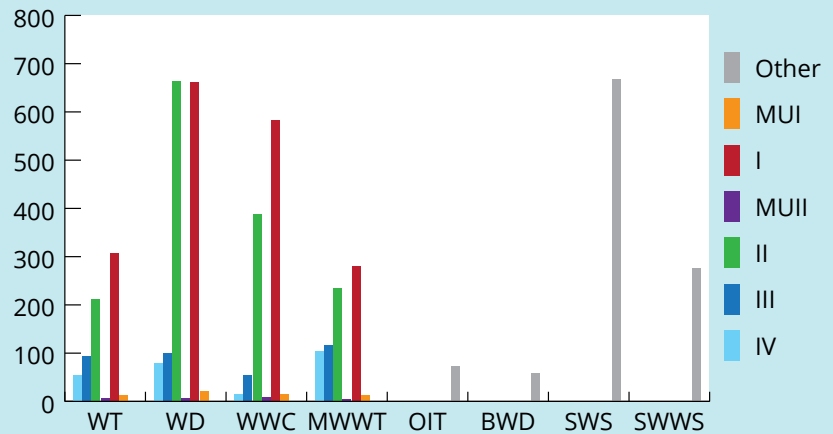
729 Operators
submitted CEUs

1,282 CEUs were
earned

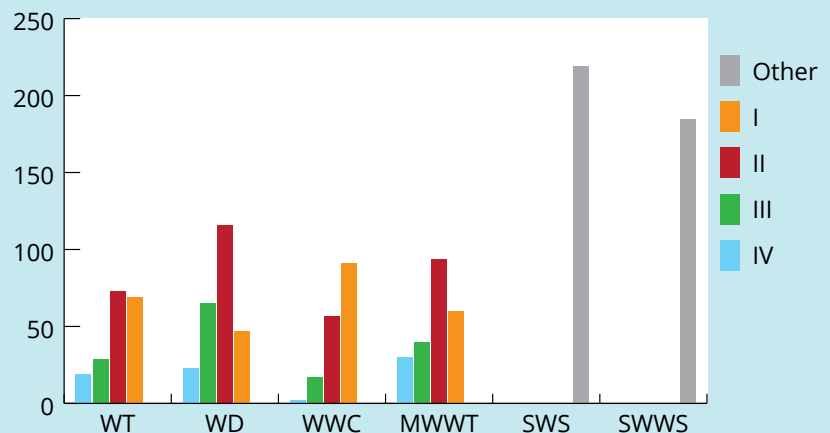
DEFINITIONS

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 (Oct. 1 - Dec. 31, 2020)



Facility Certification (Oct. 1 - Dec. 31, 2020)



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In accordance of health and safety guidelines we going virtual again with a program of innovative presentations, numerous panels and roundtable sessions, and a unique trade show experience. BCWWA has 48 years worth of experience hosting conferences and trade shows, and our 2020 virtual conference & trade show received exceedingly positive feedback. We're excited to continue our tradition of providing quality networking and training opportunities.

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The call for abstracts and moderators will open in January. Our sponsor and exhibitor applications as well as early bird registration open in February. Visit our website and subscribe to our virtual conference newsletters to stay up-to-date with our 2021 virtual conference & trade show news.

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