OPERATOR DIGEST

SPRING 2018 | NUMBER 136

EOCP

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

ARMY BEACH

A Water Treatment Facility in Whitehorse, Yukon P4

TRAINING!

Conference proposed innovative training methods to bring a new generation up to speed with the latest technologies. P4

INNOVATION

FLOOD PROTECTION

Sometimes innovation is about creative but simple solutions to problems. P9

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.

MESSAGE FROM THE DIRECTORS AND STAFF

Rob Fleming, Chair

Kalpna Solanki, CEO

A number of projects underway at the EOCP over the past year have been completed, with a few to be completed soon:

1. A component of the launch of our Customer Relationship Management system, is our new voting system. This could not have come at a better time, as elections for directors are now underway. Please visit the candidates page at our website to see the list of nominees – click on each candidate's photo to find out more about them. The candidates are also listed on Page 14 of this newsletter.
2. The full board of the EOCP, along with two staff members, made its first trip to Yukon to meet with key stakeholders, and tour a water treatment facility. This was an excellent opportunity to discuss the challenges unique to Yukon and develop plans to work more closely with the Government of Yukon and Yukon College.
3. The EOCP Tradeshow and Conference planning is well under way. A Call for Presentations has gone out, a preliminary Conference Program has been developed, and a Sponsorship Prospectus has been finalized. Be a founding supporter of the first EOCP Tradeshow and Conference that is designed by Operators, for Operators - early-bird registration is open, so make sure to Register soon!
4. In an effort to increase engagement with our stakeholders, the EOCP recently attended the Assembly of First Nations' Water Symposium where we had the ability to emphasize that a more wholistic approach is needed to end drinking water advisories in Canada - it's not just about dollars for infrastructure; Certified Operators to work in the facilities is the keystone for success. More recently we also attended the Coastal Water Suppliers Association conference where we had an opportunity to engage with Operators on Vancouver Island, and speak about the changes at the EOCP.

We feel privileged to serve the water and wastewater sectors of British Columbia and Yukon - providing more than 4.2 million people with safe drinking water and wastewater management – and we look forward to seeing you at our Tradeshow and Conference in September 2018.

Rob Fleming, Chair
Kalpna Solanki, Chief Executive Officer

EOCP Staff and Board were in Whitehorse, Yukon meetings with Yukon Government Community Services, and Health and Social Services.

EOCP TRADESHOW AND CONFERENCE

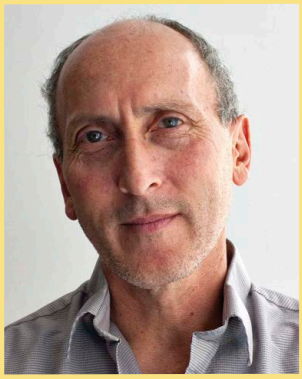
9-11 SEPT. 2018, VANCOUVER

SWS SWWS WT WD WWC WWT

CHOOSE YOUR LEARNING STREAM, OR PICK & CHOOSE TOPICS FROM 3 DIFFERENT STREAMS!

ENQUIRE. LEARN. APPLY.

Designed by Operators for Operators. This event will provide learning opportunities for water and wastewater sector professionals on innovative solutions and new insights to foster the prudent management of water and wastewater in British Columbia and Yukon.



KEYNOTE SPEAKER COLIN PERKEL

Colin Perkel has been a senior journalist with Canada's national news agency, The Canadian Press. Colin is the author of 'Well of Lies', an in-depth look at the Walkerton water tragedy where over a period of a week in May 2000, hundreds of people in Walkerton were afflicted by a deadly strain of E.coli bacteria.

MARRIOTT PINNACLE
1128 West Hastings Street, Vancouver, BC
Phone: 604-684-1128
CLICK HERE to book your room

EARLY-BIRD REGISTRATION OPEN NOW! **REGISTER**

EOCP TRADESHOW AND CONFERENCE

ARMY BEACH

A Water Treatment Facility in Whitehorse, Yukon

by Carol Campbell P. Eng
and Kalpna Solanki BSc MBA CPHI(C)

In March 2018, the CEO, Office Manager, and Board of Directors of the EOCP had the opportunity to meet with key stakeholders in Yukon and visit an impressive water treatment facility.

Situated on the north shore of Marsh Lake in Yukon, Army Beach is a small recreational community comprised of a mix of summer-only residents and a growing number of year-round residents. Residents previously obtained drinking water from a variety of sources such as commercial haulers out of Whitehorse, self-haul, or directly from the lake.

In 2006, the Yukon Government proposed development of a new water treatment plant and bulk water fill station at Army Beach to provide a local source of water to be distributed by commercial haulers. Engineering services for the design and construction of the intake, water treatment plant, and bulk water fill station were provided by Opus Engineering Consultants (Canada) Ltd (Opus).

Previous investigation of groundwater sources proved the lake water to be a more cost-efficient source to treat. Several intake and pump configurations were assessed. The intake line was installed deep below the frost line, using directional drilling methods, going out about 500 meters out into lake. Ultra-filtration, or membrane filtration was selected for treatment and two GE ZBox package plants were installed. The facility, completed in 2009, also includes a bulk truck fill system, complete with an automated billing system.

Horizontal drilling of water intake pipe.

Membrane Trains.

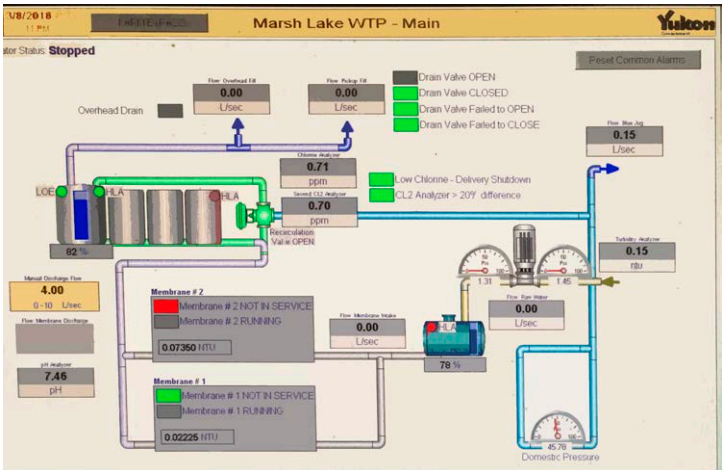
Q & A

1. Why a new facility?

The facility was to provide a public bulk potable water fill station and emergency fire truck fill point at the Army Beach subdivision and Marsh Lake Recreation Site. The station was intended to be used by commercial bulk truck haulers and residential users via a 'blue jug fill point' and a 'pickup truck fill point'

David Hart, EOCP Certified WTI and WD I Operator

Fill Station Instructions



Visualization of Systems

2. Why was this location chosen?

The location was selected to be convenient to the Army Beach community as an alternative to hauling water from Whitehorse. It was also selected to permit fire trucks to re-fill as there is no satellite firehall in this area.

3. Why was this technology selected?

A groundwater investigation was unsuccessful in finding good quality water with sufficient yield, so the decision was made to use Marsh Lake as the water source. Ultrafiltration and chlorine disinfection using sodium hypochlorite, with contact time, was selected to meet the treatment requirements of Guidelines for Canadian Drinking Water Quality. The water treatment objectives were the following:

- log (99.99%) reduction/inactivation of viruses
- 3-log (99.9%) reduction/inactivation of Giardia and Cryptosporidium
- 2 (dual) disinfection/treatment barriers
- <1 NTU turbidity
- 0 Fecal/e.Coli

4. Water quality before and after:

Generally, the quality of the water from Marsh Lake was very good, but as a surface water required a robust and effective treatment system to be safe to drink.

5. Where did the funding come from?

Federal and Yukon Governments.

6. Highlights of the facility:

- The intake line was installed deep below the frost line, using directional drilling methods, to 500 m out into lake; a submersible pump was installed 25 m down the intake line, below the lake low water level, about 8 m below the ground surface; the intake pipe was brought to surface inside the water treatment plant.
- Simple slab on grade foundation construction with a pre-engineered steel building using pre-fabricated Zip panels for simple construction and high insulation values.
- Fully automated, with automatic shutdown for critical water quality parameters or equipment failures; online chlorine residual and treated water turbidity monitoring provided with plant shutdown for high turbidity or low chlorine residual.
- The system generates minimal backwash (back-pulse) water which is directed to a rock pit at the site.
- The facility also includes a truck fill system, complete with an automated billing system.
- Chlorine contact and water storage were provided inside the building using HDPE tanks, allowing operators to see and clean the tanks easily.
- A SCADA computer allows the operator to access the plant remotely via the internet to monitor the systems, check and acknowledge alarms, and change set points.

7. Benefits of the facility:

A convenient and safe source of drinking water for the local residents and recreational users of Marsh Lake, and a facility to supply bulk water to commercial suppliers and to fill fire trucks.

8. Project Costs: $2,700,000

Some additional advantages of this facility design from an Operator standpoint are that it produces very high-quality water with little downtime - as long as maintenance schedules are followed. While the overall system is somewhat complex for such a small plant, once the Operators became familiar with it, they found it to be robust and reliable.

CHALLENGES AND TRENDS IN TRAINING

by Kalpna Solanki BSc MBA CPHI(C)

The recent ABC Conference: Innovation in Certification 2018 offered a unique opportunity to share, grow, and innovate through informative technical sessions and opportunities to connect with colleagues and exhibitors. A full day set aside for Trainers' Workshops covered ground related to challenges in training, and recent trends. Also, divulged was that the term 'Continuing Education Unit' (CEU) came from the International Association for Continuing Education and Training (IACET)!

On-demand learning opportunities like augmented reality could motivate and engage a new generation of operators to put theory into practice.

Some key challenges identified by several speakers:

- Along with the aging workforce, there is an aging population of trainers;
- Training providers are being undercut in a competitive marketplace;
- Often, the focus has been on hours of training rather than competencies;
- There are ongoing and significant technological changes in the industry; and
- Training programs are designed with students sitting in their seats for more than 90 minutes at a time. The 8:20:90 rule of training is not considered – alert and attentive for the first 8 minutes, attention wanders at 20 minutes, and you've lost them at 90 minutes.

Some trends and opportunities identified by trainers and training organizations:

- Supporting the development of worker skills aligned with competencies needed in the workplace;
- Professional skills and industry-related knowledge woven into courses and
- projects enabling students to develop a context for what they are learning;
- Potential for augmented learning with on-demand learning opportunities;

- A range of real-world experiences – from mentoring and job shadowing to internships – that expose students to possible career paths;
- Increased structured on-the-job training;
- Micro-learning – teaching and delivering content in small, specific bursts of time via video, podcasts, blogs, interactive models, social media, or competitions;

- The ability to collect Digital Badges – a validated indicator of an accomplishment, skill, or attribute that can be earned in a learning environment;
- Building a diverse workforce – veterans, women, immigrants, and career transitioning individuals;
- Identification of paths: become an operator, become the supervisor, become the utility manager;
- Training for a different skill set – going from manual operation to troubleshooting, analytical decision skills, math, and spreadsheets; and
- A new focus on accreditation of trainers to ensure they provide high-quality instruction.

The industry is changing – retirements, working with a millennial mindset, and a great deal of technological change. These changes mean that the training options need to evolve, too!

WHO'S ON THE MOVE

Pat Miller

Director, Public Works Services, Sun Peaks Mountain Resort Municipality

Pat Miller joined Sun Peaks Mountain Resort Municipality along with her entire crew on January 1, 2018 as part of the move by the Municipality to purchase the Utility from the resort developer, Sun Peaks Resort LLP. With the move, Pat's title changes to Director, Public Works Services. Pat has been an EOCP Certified Operator since 2002, and she currently hold a Level III in Water Treatment and Level II in Water Distribution, Wastewater Collection and Wastewater Treatment. Her goal over the next few years is to pass Level IV exams in Water Treatment and Wastewater Treatment. Pat also holds certification as a Gas Utility Technician from the Technical Safety Authority.

Pat is currently a Board member and the Past-Chair of EOCP's Board of Directors as well as serving on a number of EOCP committees. Pat will be stepping down from the EOCP Board after serving EOCP for the past 14 years. Of her many accomplishments on the Board, her proudest completed goal since she first ran for the Board, is the establishment of the Multi-Utility Certification for small utilities where Operators who work in two or more utilities allows for Operators to become Certified in their multiple utilities faster than the normal single certification process. She feels that she is now leaving the Board in very capable hands and has the strength and mandate to continue to focus on protecting public health and protecting the environment.

Pat has always believed strongly in Operators and will continue to support Operators through her teaching efforts at BCWWA Small Water and Wastewater Systems' courses as well as a sessional instructor with Thompson River University's Water and Wastewater Technology 2-year Diploma Course.

Pat continues to serve on the boards of Public Works Association of BC, BC OneCall, and the Sun Peaks Health Association. The Health Association recently opened a community health facility staffed with two, soon to be three, family physicians to meet the needs of the rapidly growing community of Sun Peaks.

Sun Peaks
MOUNTAIN RESORT MUNICIPALITY

DO YOU KNOW YOUR DRINKING WATER OFFICER?

By J. Ivor Norlin, MSc., RPBio., CPHI(C) Manager, Drinking Water Systems Program, Interior Health Authority

Effective regulation is a tenet of a multiple-barrier approach to clean, safe, and sustainable drinking water (Figure 1). In British Columbia, regulation of community water supplies is accomplished through a variety of Acts and Regulations depending on the type of ownership. However, the principle legislation for safety in all drinking water supply systems is the *Drinking Water Protection Act and Regulation* (SBC 2001, C.9).

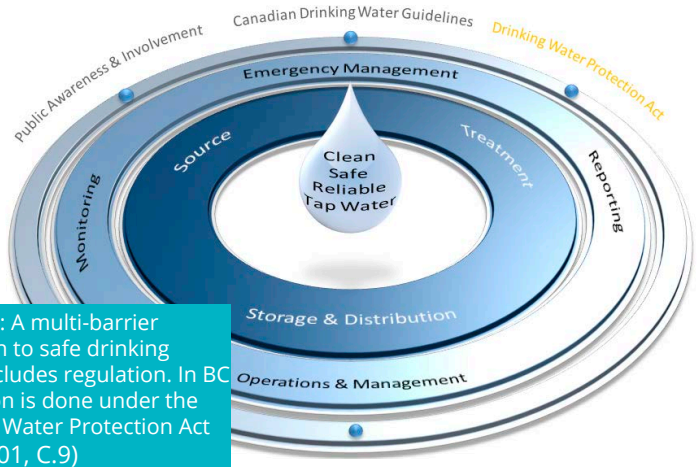


Figure 1: A multi-barrier approach to safe drinking water includes regulation. In BC regulation is done under the Drinking Water Protection Act (SBC 2001, C.9)

The Drinking Water Protection Act (DWPA) is an outcome-based legislation. There are some specific requirements (e.g. permits; emergency response and contingency plans), but the legislation generally avoids prescribing how water suppliers go about making water safe. This affords flexibility for cost-effective services to users; it also includes a significant amount of discretion. This discretion can be challenging for those tasked with enforcing the regulation, requiring understanding of the circumstances faced by each individual system.

The Act places authority in the hands of local Drinking Water Officers, rather than centralizing authority in senior leaders. Drinking Water Officers can enforce all aspects of the Act. The principal Drinking Water Officer in a health region is the Medical Health Officer, (Medical Doctor specializing in community medicine). They work for their regional Health Authority (Figure 2) but their jurisdiction comes directly from the BC legislature as an Order in Council.

Medical Health Officers are very busy responding to all health issues within their communities, including all communicable diseases and hazardous substances, so they delegate their authority to Health Authority staff to act as Drinking Water Officers to regulate community water supplies. Delegated Drinking Water Officers need core skills in risk assessment and application of public health law. Environmental Health Officers are commonly delegated the role of Drinking Water Officers as they are nationally certified with degrees in Environmental Public Health.

Figure 2: British Columbia Regional Health Authorities

Under *The Drinking Water Protection Act,* public and private water system owners are responsible for ensuring their water is safe, including ongoing monitoring and implementing necessary system upgrades. While the legislated requirements of drinking water systems are exactly the same in all BC health authorities, the challenges water suppliers face differ. Geography, historic development, and ownership type all shape the challenges water suppliers face in each region of our province.

Example: The Interior Health Region

The Interior Health region has over 750,000 residents served by 1,944 permitted water supply systems. Approximately 40% of all the permitted water supply systems in BC are located within the Interior Health boundaries. Its drinking water systems program provides services to community water suppliers through two teams supported by administrative staff and a small group of public health engineers. One team of four Environmental Health Officers provides focused service to the 81 largest systems serving over 80% of residents. A team of eight serve 1,413 small water supply systems, the majority of these systems having fewer than 15 connections.

The Interior Health drinking water program core objectives align with the BC's Guiding Framework for Public Health, the provincial framework for supporting the overall health and well-being of British Columbians and a sustainable

public health system. They focus on improving safety by implementing the BC Action Plan for Safe Drinking Water and working to improve stewardship of water through partnership. The goals of the program are to: reduce economic and social costs arising from non-compliance, increase safeguards to protect public health, and reduce waterborne disease. Resources are focused firstly on collaboration (e.g. committees, research and education partnerships, and technical support) and secondarily on permitting, inspection and, when necessary, emergency response and investigation.

In 2017 the Interior Health Chief Medical Health Officer published a report which found outbreaks of drinking water disease common in the 1980s and 90s are no longer occurring. This corresponded with system improvements and increased regulation, including precautionary drinking water advisories (e.g. Boil Water Notices). Many residents continue to be subject to water advisories due to poor water quality and water system deficiencies, and it is certain than some people are still getting sick from their drinking water. The report attributes these ongoing exposures to the lack of appropriate safeguards under a multiple-barrier approach and recommends all large surface water systems achieve provincial treatment objectives by 2025.

For more information on the IH Chief Medical Health Officer's report visit www.drinkingwaterforeveryone.ca. For more on DWOs and how drinking water is regulated in BC, visit www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/how-drinking-water-is-protected-in-bc

CATCH BASIN FLOOD PROTECTION BAGS

A simple, innovative solution to a costly problem

Every year the City of Kamloops experiences varying freshet, the spring snow melt, and every year the City closely monitors the rise and fall in both the North and South Thompson River systems through the City boundaries.

With each freshet comes the concern that the storm drainage systems out-falls into the rivers will be covered in water. This can cause a reverse flow up the drainage pipes, exfiltration out of the catch basins and spillage onto roadways, as well as cause other water issues.

The City used to take tarps or a piece of poly and place it on the grate and frame of the identified low lying catch basins, and then cover the entire grate with sand/gravel in the hopes that sealing it off would prevent water from escaping from the connecting drainage pipes. This process was very costly and time consuming, not so much for the placement of said gravels, but for the cleanup that came after the rivers receded. It was labour intensive and initially involved a back hoe and truck, and then a vactor truck which was used for catch basin and pipe cleaning.

The City's Utility Services Maintenance division came up with the idea to use large tote bags instead of tarps and poly. A tote bag is filled with sand, then a backhoe is used to place it directly over top the catch basin or manhole, which allows them to maintain a seal and speed up the clean-up process, saving both time and money. The labour and equipment needed is minimal now. The bags have been custom labeled, which helps with both road safety and identification, and to educate the public why the bags are in place.

THE EOCP – PAST, PRESENT, AND FUTURE

by Kalpna Solanki BSc MBA CPHI(C)

With the 50th Anniversary of the Environmental Operators Certification Program (EOCP) in 2016, and the numerous changes the organization has undergone over the past two years, it seems to be an appropriate time to pause and reflect on the history of the EOCP, and what lies ahead.

A program for the voluntary classification of water and wastewater treatment systems and certification of Operators began in BC in 1966 and was run by a small ad-hoc group of individuals who recognized that some standards for the industry were needed – this was the first such organization in Canada. Initially, the organization was registered as the British Columbia Water and Wastewater Operators Voluntary Certification Program (BCWWOVCP). The organization has been instrumental in advocating for facility classification and operator certification leading to the recognition of 'Environmental Operator' as a profession, the compensation commensurate with the responsibilities of the position, and ultimately improved protection of public health and the environment.

In 1981, the organization's first constitution was approved by its membership. This constitution was then updated in 1991, and then again in 2009.

In 1973, the certification bodies from several jurisdictions came together to create an organization to harmonize their activities and provide mutual benefits to their members. The EOCP was one of the Charter Members of this organization, the Association of Boards of Certification (ABC), and remains an active contributing participant of the ABC. Currently, ABC provides most of the examinations that are used in BC and Yukon, and ABC has become the international standard for classification and certification throughout North America, the Caribbean, and parts of Europe.

In 1993, 27 years after the formation of the EOCP, the BC Ministry of Environment, Lands, and Parks (MELP) made the classification of municipal wastewater treatment Facilities and the certification of their Operators a requirement of the permits under which they operate.

In 1995, the Society's name was legally changed to the Environmental Operators Certification Program (EOCP). This name change helped delineate the role of the Society as an entity distinct from others in the province, and to facilitate the expansion of new services in the future.

The promulgation of the BC Municipal Sewage Regulation by the Ministry of Water, Land, and Air Protection in 1999 further increased the responsibilities of the EOCP. Subsequently, in 2001, there was the enactment of the BC Drinking Water Protection Act and Regulation requiring the classification of water treatment Facilities and the related certification of the Operators working in the Facilities. An additional development was the promulgation of the Public Health and Safety Act in 2007 by the government of Yukon which also mandated the classification of water and wastewater Facilities, and the related certification of Operators who maintain the Facilities. In 2015, the BC Municipal Sewer Regulations was replaced with the BC Municipal Wastewater Regulations and required wastewater collection Operators to become certified.

These strides by the EOCP, over the past 52 years, established its role for facility classification and Operator certification, and helped close the loop between 'watershed to tap' and 'drain to watershed' to enable the prudent management of water and wastewater in BC and Yukon.

In February 2015, the Ministry of Health completed a 'Directions Report' that outlined potential changes to the EOCP and its role regarding the governance of water and wastewater facilities and systems.

Then, in 2016, the Ministry of Health contracted MNP LLP to conduct a strategic review of the EOCP's role and authorities, its governance and function, accountability, and sustainability.

Over the past two years the EOCP has undergone significant change, to enable the organization to better meet the needs of its membership and keep up with technological changes in the industry. The changes have been significant, and each change has had a purpose behind it:

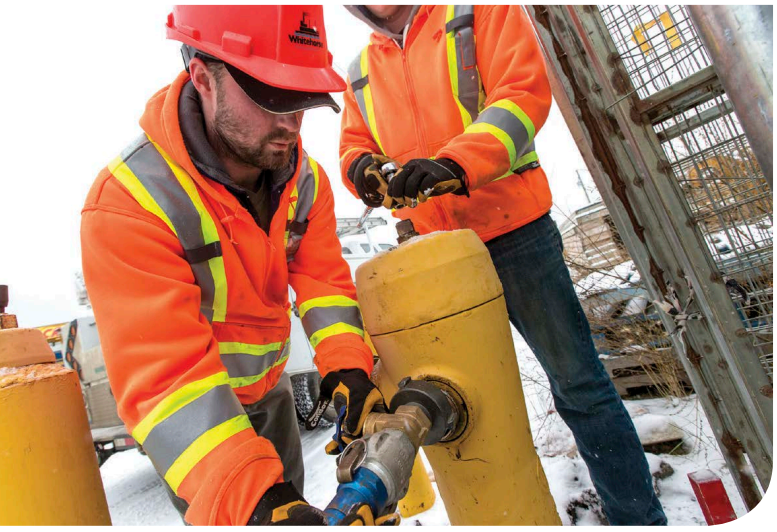
1. The new Constitution and Bylaws for the Society were ratified by its membership. The goal of this change was to:

a. Better delineate the role of the staff and the board;
b. Have regular board renewal by limiting the length of board terms and the number of terms;
c. Increase the diversity of the EOCP's Directors – whilst the majority of Directors are Operators, other stakeholders are represented as well.

2. Development of new classification models for Water Treatment, Water Distribution, Wastewater Collection, and Wastewater Treatment were developed, and implemented. Compared to the old models, the models introduced in 2017 better reflect:

a. Operational complexity
b. Operational sensitivity
c. Operator attention and maintenance

Continued on page 12



All photos by Fritz Mueller Visuals

Work with our world's most precious resource — WATER

Yukon College knows everything depends on water, and is committed to helping you gain the skills needed to work in the drinking water and water sanitation sectors.

Our Yukon Water and Wastewater Operator Program (YWWOP) offers a range of courses designed to meet the needs of new and prospective Operators, as well as current Operators working within governments (e.g. municipal, territorial, First Nation) and the private sector (e.g. mining, water delivery, plumbing). Our courses are relevant to anyone involved with or interested in water and wastewater.

Core courses are designed to prepare the participant to challenge a related **Environmental Operator Certification Program (EOCP)** certification exam.

Elective courses are designed to develop technical skills and workplace essential skills, and offer **Continuing Education Units (CEUs)**.

ELECTIVE COURSES INCLUDE:

- Polyethylene Pipe Fusion
- Cross Connection Control
- Chlorine
- Passive Wastewater Treatment
- SCADA and Control Systems in Yukon
- Water Quality Monitoring and Recordkeeping
- Emergency Response Plan
- Source Water Protection

INFORMATION:

867.668.8798 or
ywwop@yukoncollege.yk.ca
yukoncollege.yk.ca/ywwop

YWWOP classes and EOCP exam sessions can be facilitated at any Yukon College campus or surrounding NWT and Northern BC community on an on-demand basis. Alternatively, YWWOP classes are available through web-conferencing (FUZE).

YukonCollege

Yukon Government

NEW CERTIFICATIONS

Another FIRST in Canada, the EOCP will be introducing two new certifications in 2019

1. Drainage Operator

Over the past few years, due to climate change, there has been a noticeable increase in the number and severity of rain events. Along with this, development without adequate drainage plans, has resulted in flood events in many areas. Several municipalities now have a Drainage Utility that is often staffed by EOCP Certified Wastewater Collection Operators. However, the skill set necessary to work in Drainage is becoming more specialized, and the EOCP will therefore implement this program in BC and Yukon as of mid 2019.

2. Sewage Hauler

The EOCP has worked closely with the Government of Yukon in the development of a training, examination, and certification program for Bulk Water Delivery. However, there is a very obvious lack of a similar program for Sewage Haulers. The goal of this Certification is primarily to ensure that Sewage Haulers have the necessary skill set for work in this area, in addition to ensuring the protection of public health and the environment. This program will first be rolled out in Yukon in mid 2019, followed by a rollout in BC.

EOCP Continued from page 10

d. Consequence/s of failure
e. Impact to Water/Effluent Quality

3. A new Customer Relationship Management System was implemented. This has been the largest project ever undertaken by the EOCP, and was primarily in response to the need to:

a. Become compliant with FOIPPA requirements;
b. Link classification, certification, billing, and career management through one portal;
c. Allow for the ability to add increased functionality as needed.

4. Stricter measures on what constitutes 'Certification'. This measure was implemented to ensure that qualified Operators work at facilities, and where Operators are not maintaining certification, their employers and the relevant ministries are informed of potential impacts on their liability;

5. Expiring certificates of classification are being issued, with ALL facilities having five-year expiration dates;

6. Working with the Ministry of Health and the Ministry of Environment and Climate Change to develop a compliance model that enables better monitoring and compliance with the applicable regulations;

7. Ongoing public relations and communications efforts to increase the awareness of the profession;

8. Development of processes to ensure consistency in policies and procedures;

9. Increase in the number of training and examination opportunities for Operators; *and*

10. Regular strategic planning sessions involving EOCP directors, staff, and government agencies to map out a path for the future of the EOCP.

Fifty-two years later, the EOCP continues to grow, work with its stakeholders, and has been evolving to ensure that the needs of Operators and employers are met, while continuing to work in the public interest.

ARE YOU PREPARED FOR THE FUTURE OF WATER?

BCWWA professional development events provide learning and networking opportunities in the evolving water and wastewater sector.

CONFERENCES

Conferences provide access to some of the top thought leaders in the water and wastewater sector and an excellent opportunity to expand your network of engineering, technology and operations contacts.

WEBINARS

BCWWA Membership gives you free access to live, online seminars that explore new information, research, and technology in a format that suits your busy schedule.

SPECIAL EVENTS

From our Interface Fires Risk Mitigation workshop to Continuing Education Days for operators, the BCWWA is continuously developing innovative events to address emerging needs for professional development.

DON'T MISS THE 46TH ANNUAL BCWWA CONFERENCE AND TRADE SHOW
MAY 13-15, 2018 IN PENTICTON, BC

Register for upcoming conferences, webinars and special events at **bcwwa.org/events**

BCWWA
BC WATER & WASTE ASSOCIATION

ELECTIONS
FOR BOARD DIRECTORS

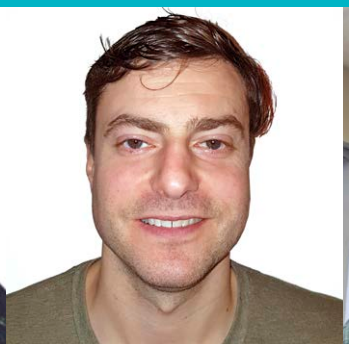
Elections run from 8 am on April 16th to 4 pm on May 16th.

Operators Certified by the EOCP are eligible to vote for three candidates – one in each category - according to the listed criteria.

Click here to find our more about each of our candidates. To vote, please use the link sent in your email and vote via the Customer Relationship Management system.

ONE POSITION to be filled by a member who is an EOCP Certified Operator. Candidates are:

Krista Derrickson (Incumbent)

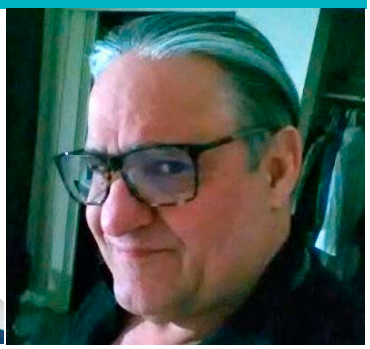


Christopher Kerman

Doug Regehr

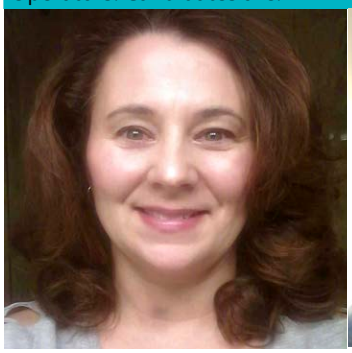
ONE POSITION to be filled by a person who is, or has been, employed in an administrative capacity in a local, regional, provincial or federal government agency directly involved in the water, waste, or wastewater operations field. Candidates are:

Rob Fleming (Incumbent)



Darcy Dragonetti

ONE POSITION to be filled by a person who is or has been a faculty or staff member at a post-secondary education institution whose major field of activity is in the training of water, waste, or wastewater Operators. Candidates are:



Allison McMillan

Satwinder Paul

STATISTICS

January to March 31, 2018

EOCP
Environmental Operators Certification Program

A new CEU reporting period began on January 1, 2018. The figures in Operator certification report reflect those who have met the CEU requirements for the 2016 -2017 reporting period, as well as having paid for their 2018 Operator dues.

Exams

- **244** Operators wrote certification exams in 67 sessions from 1 January, 2018 to 31 March, 2018.

Facilities

- **83** facilities were classified/reclassified from 1 January 2018 to 31 March 2018.

OPERATOR CERTIFICATION as of March 31, 2018

Classification	IV	III	II	MUII	I	MUI	OIT	Total
WT	35	62	131	6	230	6	35	**505**
WD	63	117	496	10	476	12	37	**1,211**
WWC	12	40	264	6	392	10	29	**753**
MWWT	95	69	129	10	158	11	27	**499**
IWWT	0	2	10		12			**24**
BWD								**30**
SWS								**436**
SWWS								**155**
Total	205	290	1,030	32	1,268	39	128	**3,613**

FACILITY CLASSIFICATION as of March 31, 2018

Classification	IV	III	II	I	Other	Total
WT	18	41	124	54		**237**
WD	33	53	175	159		**420**
WWC	12	21	80	109		**222**
MWWT	26	33	106	80		**245**
IWWT	2	1	5	1		**9**
SWS					873	**873**
SWWS					249	**249**
Total	91	149	490	403	1,122	**2,255**

Definitions

WT	Water Treatment
WD	Water Distribution
WWC	Wastewater Collection
MWWT	Municipal Wastewater Treatment
IWWT	Industrial Wastewater Treatment
BWD	Bulk Water Delivery
SWS	Small Water System
SWWS	Small Wastewater System

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- Instrumentation
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- Smoke Testing
- Package Treatment Plants
- Leak Detection
- Odour/Corrosion Control

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TEL: **604-940-5556**
TOLL FREE: **1855.940.5556**
#1- 7163 Vantage Way,
Delta, B.C. V4G 1N1
www.biomaxx.ca