

OPERATOR DIGEST

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

PLANT PROFILE

A VISIT TO TWO WATER TREATMENT FACILITIES IN WEST KELOWNA!

The new Rose Valley water treatment facility currently under construction is needed because drinking water advisories are common. The nearby Powers Creek water treatment facility has a unique treatment process. To allow for cross-training and movement of Operators between the two facilities, the treatment processes are complementary. Full story P4

WHEN SYSTEMS FAIL

Hydrogen
Sulphide (H_2S)
corrosion
causes
catastrophic
failure in
Squamish P7



EOCP & ESG

Environmental,
Social, and
Governance goals

Board Chair,
Chris Kerman,
in Barbados
with Operators
Without
Borders P10



OPERATOR DIGEST

The **Operator Digest** is the official magazine 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

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OPERATOR PROFILE

Mike McLachlan

CWP, CWWP, Utility Stations
Supervisor of Water & Waste Services



How did you become an Operator?

I was always a person that was curious how the water got to my tap and was also curious about what happened to the wastewater after being flushed. I knew it wasn't magic, but like most people, really didn't have a clue. In 2005 colleagues of mine who had already begun a career as Operators mentioned that a temporary position was available with the Water and Waste department in Whitehorse, Yukon and I thought I was a good fit for the job. I jumped at the opportunity to satisfy my curiosity about utilities and have a chance at a career as an Operator. Talking to EOCP Operators back then gave me confidence that this was a great career choice.

How long have you been an Operator?

Although I worked in the Water and Waste department from May of 2005 onwards, I wrote my first Operator in Training exam in June 2006. I've been in the industry for 17.5 years, and have been certified as an EOCP Operator for 16.5 years.

What are your core functions? As one of the supervisors in the City of Whitehorse Water and Waste Department, my current role is providing direction, guidance, and supervision for the treatment, pumping, and storage of the city's water and wastewater. I am in charge of the Utility Stations section, which also includes looking after sector budgets and procurement needs and other supervisory duties. I communicate with my manager daily and keep him up to speed on current conditions and operations. I always make myself available to get out in the field with my staff to assist with operational tasks when needed. Often, these are opportunities for training newer staff and reviewing operational procedures with more experienced Operators.

What is your typical day?

A typical day begins at 6:40 AM. I use the

SCADA system to assess the previous night's alarms if any, and review the schedules for the day to make any adjustments if necessary. The Utility Stations crew begins its day at 7:00 AM. As a crew we review any needed actions if there were operational issues from the night before. The crew then goes about its assigned routine maintenance, sampling, and testing duties, and I move onto other administrative duties. The utility consists of more than 80 different water and wastewater stations throughout the City of Whitehorse, ranging from large pumping stations to small flow meter kiosks and underground flow and valve chambers. This can take us across the entire city in a day depending on the task at hand. Up here in Yukon we tend to see a fair amount of power failures. At any time our routine tasks can get hijacked by a utility power failure and the crew kicks into high gear to ensure all the backup diesel generators are started and power is transferred correctly to maintain normal station operations.

What do you most enjoy about the work? I have always enjoyed the high level of technical knowledge needed to be an effective Operator. As Operators we learn how to run and maintain a physical water or wastewater system, understanding the forces and flows and pressures we deal with on a daily basis, and when doing repairs or various sampling and testing tasks. I find it very satisfying to take physical experience and knowledge and apply it to the instrumentation and electronic world, so a SCADA and alarming system serves the utility properly. The marriage of the physical world to the instrumentation and electronic world of a SCADA system has been quite an attraction for me over the years. Also, I have always enjoyed the challenge of logically troubleshooting and

'Operator Profile' continued on page 9

MESSAGE FROM THE DIRECTORS AND STAFF



It is Spring already, and the EOCP Staff and Board have been busy working on several initiatives:

1. In alignment with our Strategic Priority 3: **Develop and promote existing and new certification and classification programs**, the EOCP is embarking on a project for the certification of Backflow Prevention Assembly Testers as well as Cross Connection Control Inspectors.
2. We are working closely with various provincial ministries to establish a process for emergency response related to critical water and wastewater infrastructure. Some changes will be made to the CRM to allow for this, and we will reach out to you when the system is ready to collect data on volunteers.



Chris Kerman



Kalpna Solanki

3. One of our largest projects is our annual conference. We already have several organizations signed up as sponsors and/or exhibitors. We thank them for their support:

VUCA, from Volatile, Uncertain, Complex, Ambiguous, is believed to have origins in Germany around the time of the fall of the Berlin Wall in 1987, and was quite appropriately used extensively during the worst of the COVID-19 pandemic. At the EOCP, we have taken a positive spin on it, using the acronym for Vision, Understanding, Clarity, Agility. This more positive version is more appropriate for us as we continue working on our Strategic Priorities and our ESG Goals.

The registration portal for our conference opens on the 1st of May. We hope you will join us – in person or online!

With our best regards,
Chris Kerman, Chair
Kalpna Solanki, President and CEO



**EOCP's Next Conference is
11-13 September 2023!
Registration Portal opens
May 1st!**



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PLANT PROFILE

A VISIT TO TWO WATER TREATMENT FACILITIES IN WEST KELOWNA!

Sean Lefebvre, Kalpna Solanki, and Sarah Pennington tour the Rose Valley Level IV water treatment facility

By Sean Lefebvre CWP CWWP and Kalpna Solanki CPHI(C) BSc MBA

While updating some information on LinkedIn, I saw a post from Chris Anderson, Public Works Manager, West Kelowna, about a new Rose Valley water treatment facility. Of course, enquiring minds want to know, so I asked to go see it.

Through Chris, I got connected to Sean Lefebvre, CWP, and CWWP, and the wheels were set in motion for a site visit of the Rose Valley Level IV Water Treatment Facility.

Why was this new facility needed? Currently, water comes from the Rose Valley Reservoir, is chlorinated, and then distributed. There are often drinking water

advisories and boil water notices as the water quality can be poor. In addition, treatment was needed to meet the needs of a growing population and Interior Health requirements.

The water for this new facility will still be from the Rose Valley Reservoir which is a multi-use water body. The raw water is usually at less than 1 NTU, enters the facility, goes through a coarse screen and then a PRV. Coagulant and polymer are then added, and the mixture goes to four DAF tanks. Reciprocating skimmers take off the foam, and the mixture goes through filters comprising of dual media – anthracite and sand. Subsequently, the

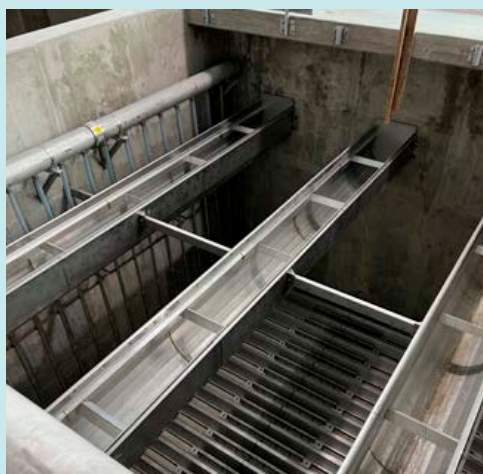
filtered water undergoes UV treatment and then has sodium hypochlorite added for disinfection and sodium hydroxide for pH adjustment. The new Rose Valley water treatment facility has the capability of treating 70 ML/day, with the potential of expanding to 120 ML/day. The facility will be operated by five to six Operators who also run the Powers Creek facility.

10% of the backwash water from the filters is recycled to the head of the process while 90% goes to storm or sanitary. Sludge that is removed by the DAF's goes to a centrifuge and the resulting cake goes to a landfill to be used as cover.

Coarse screen and PRV



DAF tank



Chemical storage room





Final treatment with UV



Centrifuge for residuals

Centrifuge sludge pump area

A diesel-powered backup generator is on site and will run either half of the plant in the event of a power failure. The generator will be tested every week, and load-tested annually.

Treated water is pumped to a brand new 10 ML reservoir, just up the hill from the treatment facility, via three 300 hp pumps. The new Rose Valley Water Treatment facility, including the fibre network interconnection to the Powers Creek water treatment facility, plus the watermain interconnects to remove two former Okanagan raw water lake sources, cost \$75 million. \$43 million came from the province and the rest came from West Kelowna reserves and taxes.

Some unique aspects of this facility are the precast walls and the steel beams that hold the building together. There is plenty of natural light allowing for a nice work environment. On site are offices, a lab, lunchroom, meeting space, and separate washrooms for men and women.

The design process for consultative with AECOM as the design engineer, Maple Reinders as the general contractor, and the commissioning to be completed by staff, design engineer, and general contractor. Commissioning is expected to begin in May, and full launch is expected to be some time in the fall of 2023.

There are definite similarities between the new Rose Valley water treatment facility and the existing Powers Creek water treatment facility in that both have DAF and filtration. However, what is unique about the Powers Creek facility is that both the DAF and filtration take place in the same basin. Whilst a bit of a complicated process, the benefit of having these two processes in one basin is the reduced footprint of the facility.

The Powers Creek facility has three treatment trains and the capability of treating up to 54 ML/day.

The cross-training of Operators and trades between the two facilities with similar processes allows for the movement of staff between the facilities as needed. To ensure even further intersection between the two facilities, the Powers Creek facility will soon be switching from chlorine gas to sodium hypochlorite similar to the Rose Valley water treatment facility.

With the upgrades to the Powers Creek water treatment facility, and the addition of the new Rose Valley water treatment facility, the City of West Kelowna is well positioned to meet the needs of its growing population as well as the challenges that may be posed by fluctuating raw water quality.



Rose Valley MCC room



Kyle Arsenault at Powers Creek

Combined DAF and filtration basin at Powers Creek



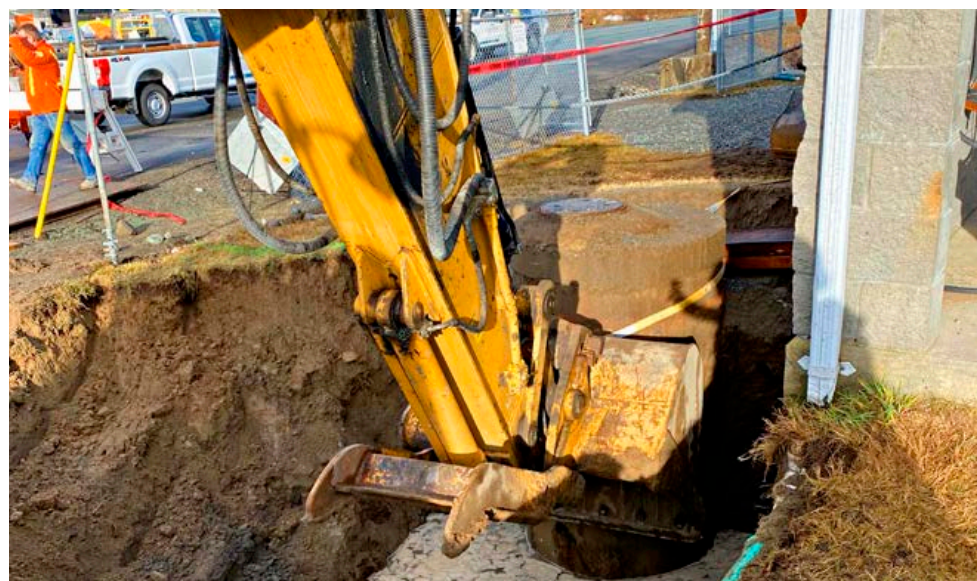
WHEN SYSTEMS FAIL

Hydrogen Sulphide (H_2S) corrosion causes catastrophic failure in Squamish

By Ben Kineshanko CWP CWWP B.Tech ASCT EP and Kalpna Solanki CPHI(C) BSc MBA



This sinkhole was the first sign of trouble

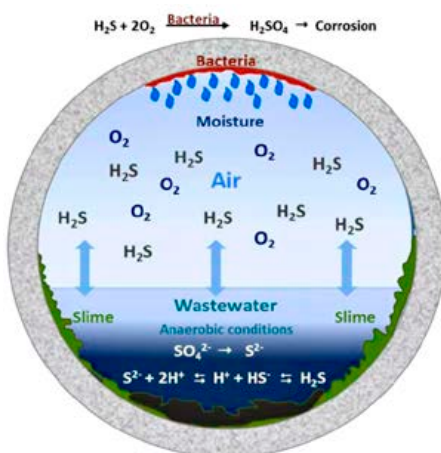


Manhole was held up by excavator to avoid total collapse

Municipal staff take pride in providing a high level of service to our communities. By and large, most of the time, the average Jane and Joe don't think twice about where the water comes from or where the wastewater goes to. Until a service interruption occurs...

The District of Squamish takes asset management seriously. Replacement planning has been a part of the regular operating, long-term planning processes, and capital plans for more than 10 years. As such, regular studies, plans, and condition assessments are completed. In 2010, the District's first Asset Management Plan. In 2015 a Liquid Waste Management Plan. In 2016, an odour study of the entire collection system and wastewater treatment plant. In 2018, a Sanitary Master Plan, and in 2019 and 2020, condition assessments were completed of 25 sanitary lift stations. During this process the Queens Way Lift Station was identified as being in poor condition due to Hydrogen Sulphide (H_2S) corrosion with several components of the lift station in need of major rehabilitation including a full re-lining of the concrete walls and replacement of all piping and hardware. The lift station is served by a manhole that serves a massive area, capturing 13 of 25 DOS lift stations as well as 6 private lift stations amounting to nearly half of all DOS sanitary sewage flow or around 3.3 ML/day of the 8.0 ML/d average received at the WWTP during dry weather.

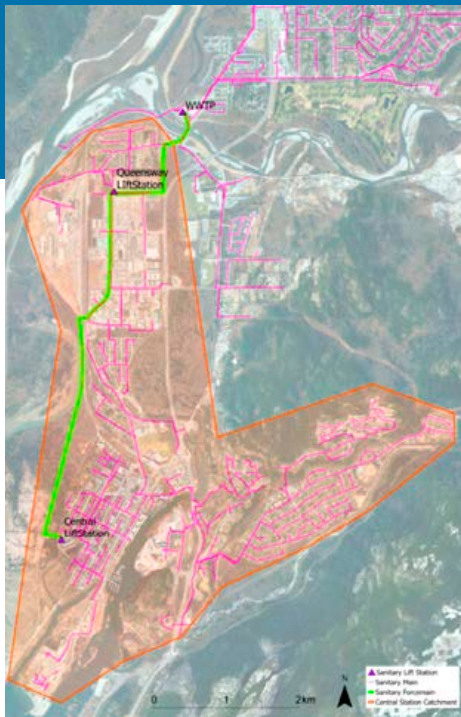
These studies found that the Queens Way inlet manhole that receives gravity flow from the area as well as pumped flows



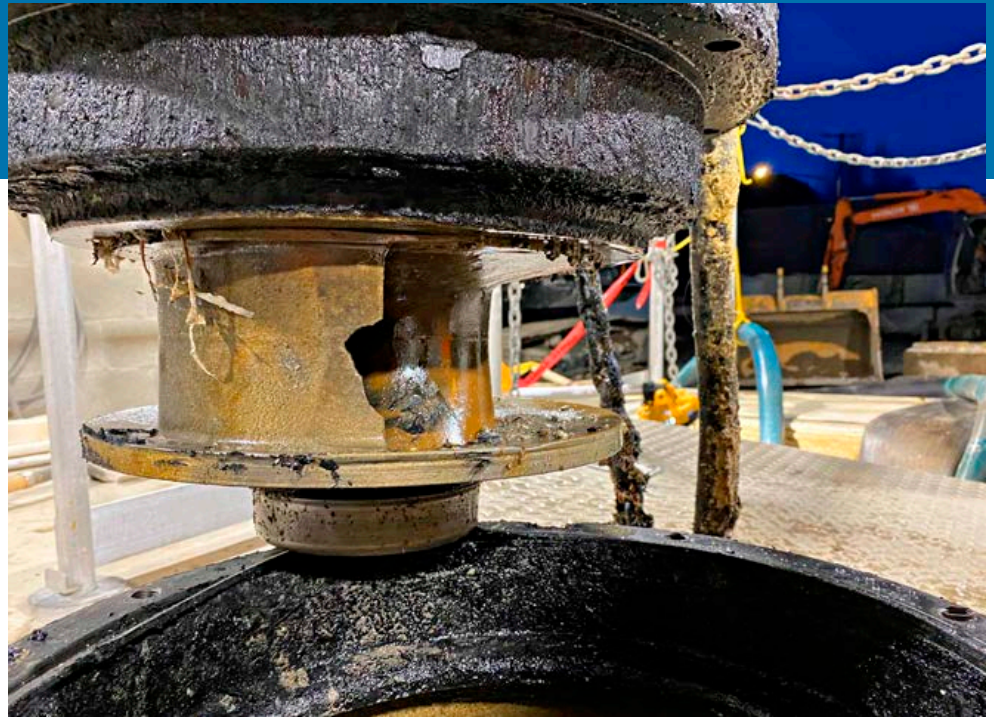
How Hydrogen Sulphide arises



Concrete corroded by Hydrogen Sulphide



District of Squamish WWC system



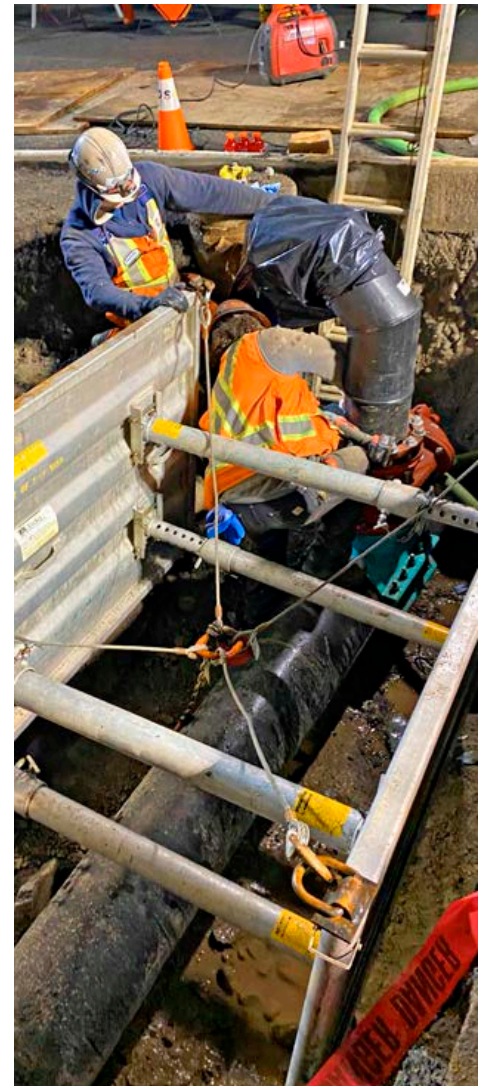
Impeller damage caused by pumping sand and gravel

from a 16" diameter, 3.5km long force main, required immediate replacement due to major structural degradation caused by H_2S . H_2S is generated by microbes that grow inside the force main under anaerobic conditions. A capital project was undertaken to design a replacement inlet manhole, temporary bypass lift station, and additional upgrades for the station. The first phase of the capital project was put out to tender in 2021, however due to the ongoing pandemic and supply chain related inflation, bid prices came back double the Class 'A' estimates and the tender had to be cancelled. The project was tendered again in 2022 with a significantly reduced scope, but that too was cancelled when tender bids again came back significantly over budget. The project was again put out to tender for the third time in 2023 with a planned closing date of the 10th of February.

But before the tender even closed, on the 9th of January a sink hole was discovered on two sides of the inlet manhole. Further investigation revealed that the cause of the sinkhole was that the 6-metre-deep manhole had become so degraded, that groundwater and liquefied sand and gravel was flowing into the lift station via the manhole. District staff immediately began preparing to install an emergency bypass. Planning included sourcing parts and materials to build the bypass, scheduling a fleet of vacuum trucks to transport wastewater to the



Completed emergency bypass



Emergency bypass connection to hot tap on force main



Benjamin Kineshanko, Kalpna Solanki, and Pádraig Glackin reviewing the damage

WWTP, HDPE welding and hot tapping contractors. Work was scheduled to be completed overnight on the 14th of January, to allow for direct pumping to the wastewater treatment plant. However, before the bypass could be built, the manhole failed catastrophically on the morning of the 14th of January 2023.

Staff were forced to immediately begin bypass construction, and crews that had been asleep in preparation for overnight construction were called in. Due to the timing of the failure, during the morning high-flow period, wastewater quickly began backing up in gravity sewer systems in the numerous catchments that were served via the Queensway Lift Station. The vacuum truck fleet was on its way but would not make it in time to prevent hundreds of properties in the downtown area from being flooded with raw sewage. A decision had to be made. Staff monitoring the situation waited as long as they could before employing a lift station bypass port at an upstream lift station to discharge into Howe Sound.

What Caused the Failure?

This type of concrete manhole would typically have a lifespan of around 100 years, instead, as a result of corrosion due to high levels of H_2S , this manhole had a lifespan of only 26 years. Anaerobic conditions in the 3.5km force main that terminated in an inside drop manhole fostered an environment where facultative bacterial growth regularly



Sheet piles in foreground to enable dewatering for manhole replacement, I-beam and cradles behind to prevent BC Hydro vault from subsiding

created H_2S concentrations in excess of 100ppm. These conditions effectively destroyed the concrete and rebar structure of the manhole and ultimately caused its failure.

What's Being Done Now?

In addition to the manhole capturing such a significant portion of the DOS's sewage, the lift station lies at a major intersection, the site has major overhead and underground BC Hydro power line and hydro chamber to one side, as well as a major natural gas line on another side. The proximity to these major utilities necessitated the use of a hydrovac for the excavations, sheet-piling, and dewatering work.

In order to replace the manhole, remove debris from the lift station, and complete a thorough impact assessment, sheet piles have been driven into the ground using a vibratory hammer attached to a backhoe to protect the utilities and allow dewatering due to the high groundwater table. In the meantime, the force main and the gravity lines continue in operation, tied together via the emergency bypass, and the sewage is pumped directly to the Mamquam Wastewater Treatment facility.

Whilst the impact of this premature failure of the manhole is significant for the District of Squamish, it could have been so much more severe. As crews had already started implementing the

emergency bypass, the response to the failure was almost immediate. The rapid response alleviated the potential for a much larger disaster. Worst case scenario was potential sanitary back-up and flooding of hundreds of properties in the downtown area and/or multiple days of pumping raw sewage into the marine environment.

During the failure event a significant mass of sand, gravel, and cobblestones were pumped through the 4x60 hp lift station pumps and force main to the wastewater treatment plant. All four pumps require rebuilding, the force main will need to be pigged, and both vortex grit separators at the wastewater treatment plant that were plugged had to be cleared several times. In addition, the aeration basins at the wastewater treatment plant will also need to be drained and have sediment removed. Due to the magnitude of the impact, full recovery will take years to complete.

Ongoing work will involve the installation of a new manhole lined with FRP and PVC along with a temporary lift station to allow the existing one to be inspected, cleaned, relined, and put back into service. The District was lucky to have had the support of crews from neighbouring municipalities, suppliers, and local contractors who all dropped what they were doing to assist with the response.

'Operator Profile' continued from page 2

solving an operational problem, especially when other Operators and staff are part of the problem solving. It can be quite a feeling of accomplishment when a problem is solved and the operation continued while the public we serve have observed nothing or no change to their water or wastewater service.

What are some challenges you face? Some of the biggest challenges come from having older infrastructure and keeping it running to high standards. Like most municipalities, budgets are foremost on the minds of all. Doing the best we can to keep older pumping stations and other infrastructure running well can be a challenge when trying to be fiscally responsible to taxpayers. Living in the far north also presents a logistics problem when it comes to sourcing repair and spare parts, as supply chain timelines can be very long, especially during the recent pandemic. I am grateful that the City of Whitehorse recognized this challenge when it was presented and made funds available to purchase a significant number of spare parts for inventory in order to keep our utility running to 'best as we can' standards and alleviate downtime of equipment.

What advice do you have on how to have a successful career as an Operator? Becoming and being a certified water and wastewater Operator is a great career and growth opportunity. Always stay open and eager to learn. In my career thus far I have never had a shortage of things to learn about. There are always technological advances in equipment or a new way to apply known principles within a system. The sheer scope the career an Operator covers in all four disciplines, in my opinion, is enough to keep a brain learning for decades. Apply oneself to absorbing as much knowledge and experience as possible and be willing to

'Operator Profile' continued on page 12

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REFURBISH **IT**

The Environmental Operators Certification Program and its Environmental, Social, and Governance Goals

By Kalpna Solanki CPHI(C) BSc MBA

The United Nations held its second Water Conference after 46 years, the first one being in 1977 in Argentina. This conference served as a reminder about the importance of a renewed focus on issues related to water, wastewater, and climate change.

Breaking each down, an update:

Environmental – the EOCP's impact on the environment:

1. A reduction of printing to reduce the use of paper;
2. A switch to more sustainable paper with the use of [SugarSheet](#) paper, made using waste from sugar operations;
3. Team members working a hybrid work week thus reducing the need to commute daily;
4. Subsidizing of transit passes for any team members who use transit;

5. A switch to environmentally friendly cleaning products;
6. Board meetings held in person only three times per year, and coordinated with other events such as the EOCP's annual conference.

Social – how the EOCP interacts with its staff, customers, and the broader community:

1. An investment in our future Operators via scholarships;
2. An investment in our staff team to help each team member prepare better for changes;
3. An investment in the broader global community via support of Operators Without Borders*, and Her₂O** initiatives;
4. Investment of EOCP's savings in ethical funds;

5. Working with agencies to attract a more diverse workforce;
6. Ongoing outreach to stakeholders.

Governance – how the EOCP is governed:

1. A solid, revised Constitution and Bylaws with the provision for an Operator director position specifically from a small community;
2. A focus on a fair, transparent, and defensible process for all aspects of operations including finance policies, audited statements, expectation of ethical conduct by staff, the CEO, board directors, and members;
3. A focus on data security and protocols to reduce the risk of cyber attacks.

The ESG goals also overlap with many of the EOCP's Strategic Priorities that are reviewed on a regular basis as we map our path forward, and help us focus on our purpose as an organization.

*Operators Without Borders

The EOCP is a founding partner of Operators Without Borders, an organization that assists water and wastewater utilities in developing countries recover from disaster situations, and also assists with building capacity through training and mentoring of water and wastewater Operators. OWB provides our certified Operators to gain 'boots on the ground' experience in other countries, and the EOCP supports the travel of three Operators each year to do this work.

This year, two of our certified Operators, Ron Enns CWP, and Chris Kerman CWWP provided outreach to Belize and Barbados specifically on a capacity building project.

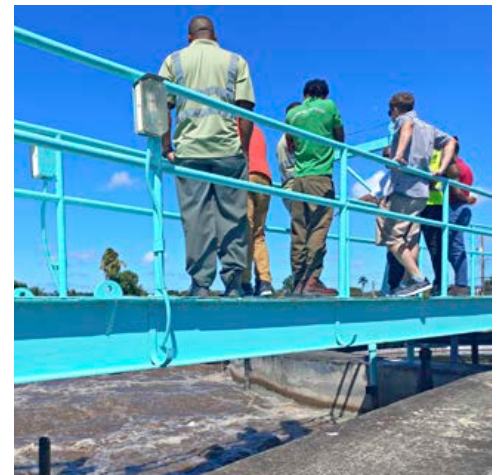
**Her₂O

Her₂O is an international non-profit that serves women and men in the water and sanitation sector. Her₂O believes women and men can function differently at work, and that diverse teams outperform in every aspect. Therefore, its focus is on recruiting, integrating, supporting, and retaining women, and creating a gender equitable sector. It does this by removing barriers and creating opportunities.

In November, Her₂O participated in a project in Kenya related to water and wastewater at several schools.



'Logs' for fuel made with sawdust and wastewater sludge



A tour of the Bridgetown Sewage Treatment Plant. Opened in 1982 (Activated sludge without primary treatment)



A 'hello' wave from the girls at Kenswed School



Brianna Huber (founder of Her₂O) and Kalpna on a visit to the Kenya Water Institute (KEWI)

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'Operator Profile' continued from page 9

take direction from more experienced Operators. Experienced Operators can carry a wealth of system and operational knowledge. Certify in the applicable fields as soon as eligible and continue to push for your own growth within a utility. It can be very rewarding to look back and see a continual path of growth and expansion within your career. Establish a rapport and be kind to design engineers along the way, they will be more open to accepting your operational knowledge and input when designing systems and pumping and treatment stations you may end up operating.

What do you do when you aren't working? I have an active family life. I like to travel with my wife. In the summer months I am an avid golfer and in the winter months I like to downhill ski. I am an aviation enthusiast and look forward one day to getting my private pilots licence.

What else can you tell us about working as an Environmental Operator? It can feel like an honor to contribute to the community you live in by working in the water and wastewater utilities. Using one's abilities for the community this way goes quite unnoticed by most as we are the unseen people who keep it all going behind the scenes. Water and wastewater workers and Operators are at the very core of our modern way of town and city living. It is our efforts, supported by the owner of the utility we work for, that contributes to the wellbeing of the community and the environment we live in. This is a rewarding place to be.

Whom would you recognize as a mentor?

It's difficult to pick just one mentor figure. My father used to work as an electrician at several pulp and paper mills, ending as the electrical supervisor at the pulp mill on the Sunshine Coast just north of Vancouver. Many conversations with him helped with decisions and career growth over the years. Several EOCP certified Operators I have worked closely with here in Whitehorse, Yukon have also had a very positive effect on my thoughts and choices as an Operator. Certain water and wastewater instructors that I have come to know during my time as an Operator have also had a positive influence on my career.

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WHO'S ON THE MOVE

Dan Arnold CWWP, Metro Vancouver WWTP Operator III

What was your first job?

I started in the municipal sector at 16 as a casual Lifeguard. A lot of Great Operators come through recreation!

What was your path to becoming an Operator?

I got into solid waste (tossing cans) and doing some trucking with a local garbage company for a change before realizing I wanted to get back indoors working in recreation. From there I became a first aid and advanced aquatics instructor for around five years. I then realized long term this wasn't the direction I wanted to go. I noticed full time labouring jobs opening up in public works, and after a few months in parks, to my dismay I was placed at the Mamquam Wastewater Treatment plant! In retrospect, this was actually one of the best things that could have happened! I was being trained by Operators who loved what they did and gave me the guidance and space to grow from a Labourer to an OIT, and soon after, an Operator.

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

After 2 years as a Wastewater Treatment Operator, 6 years as Chief Operator Wastewater Collections, and 2.5 years as Utilities Supervisor, I was fortunate enough to learn and oversee Water Supply, Distribution, Wastewater Collection, and Wastewater Treatment. I was only able to do this because of the support from an outstanding team of Operators, Admin staff, and Managers. In mid 2022 I was living in the North Shore and commuting to Squamish when I saw an opening at the Lions Gate WWTP. After an interview and tour of the facility I could see that the folks at that facility were friendly and passionate about wastewater! I had the opportunity to become a better Operator by learning a new system, have more opportunity for career growth, and have a short commute! After a career at only one municipality, it was a very difficult choice to take the leap, but so far it has been much better for myself, my career, and the time I have available to spend with my family.



Dan Arnold under the Lions Gate Bridge

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

Many people end up becoming labourers or entry level workers in utilities and they wait for a job to come up only to find out they need their Operator certification. Get the training and write those exams! Don't be afraid to fail, just get your hours and get that certification! There are a lot of opportunities out there and a lot of municipalities will reward dedicated, hardworking employees with opportunities for training and growth. You may not see the job you want immediately, but get your experience and you can work in many different sectors.

What are some of your goals in your new position?

My goal is to obtain my WWT IV certification and to learn all the ins and outs of the Lions Gate WWTP before it is decommissioned. I also hope to get involved with the technical rescue team for confined space and eventually 5th class power engineering.

What do you do in your spare time?

Now that I have a little more spare time without a commute I am spending more time with my family, hoping to get back in to cycling and snowboarding, and I'm hoping to finally finish moving in!



BETTER TRAINED BETTER PREPARED

**START
EARNING
CEUs!**

Looking to earn extra Continuing Education Units (CEUs) this year? We've got you covered! BCWWA Education has expanded its offerings to include a full range of course options and skillsets so you can meet your certification requirements.

Purchase a [BCWWA membership \(\\$109/year\)](#) for \$130 discount on ALL courses and other select products!

INSTRUCTOR-LED VIRTUAL CLASSES

Instructor-led classes in a virtual classroom format. These courses run for the same duration as physical classroom courses, and live instructors still deliver them in real-time.

UPCOMING COURSES

- Chlorine Handling
- Ultraviolet Disinfection
- Odor and Corrosion Control
- Preventing Waterborne Illness
- Water Distribution 3-4

CONTINUOUS ENROLLMENT

- Hypochlorination
- Chlorine Handling Refresher

ONLINE CLASSES

Learn at your own pace! This online format offers the same required knowledge as an in-person classroom while earning the same CEU credits.

APRIL - JUNE 2023 ONLINE CLASSES

Although courses are online, you will be assisted by an instructor to ensure all the help you may require.

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

Would you like to have an in-person class at your facility?
Contact us at education@bcwwa.org for custom training options.

REGISTER TODAY!
bcwwa.org

STATISTICS

1st January to 31st March 2023



EOCP

Environmental Operators
Certification Program

EXAM STATISTICS



369 exams
taken

130 exam
sessions

FACILITIES



32 facilities
(re)classified

CONTINUING EDUCATION UNITS (CEUs)

253 Operators
submitted CEUs

606 CEUs were
earned

DEFINITIONS

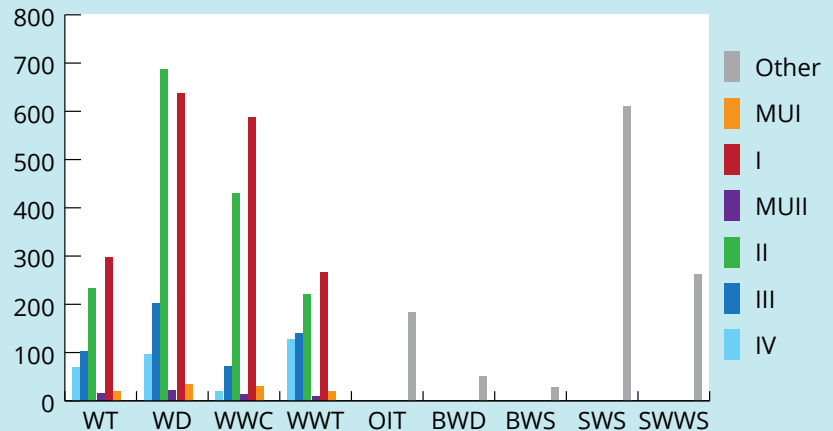
WT	Water Treatment
WD	Water Distribution
WWC	Wastewater Collection
WWT	Wastewater Treatment
OIT	Operator In Training
BWD	Bulk Water Delivery
BWS	Building Water System
SWS	Small Water System
SWWS	Small Wastewater System
MU	Multi Utility

CEUs can be added to your profile by choosing **Action > Add Course Taken** under the learning column. Or you can email your certificates to eocp@eocp.ca.

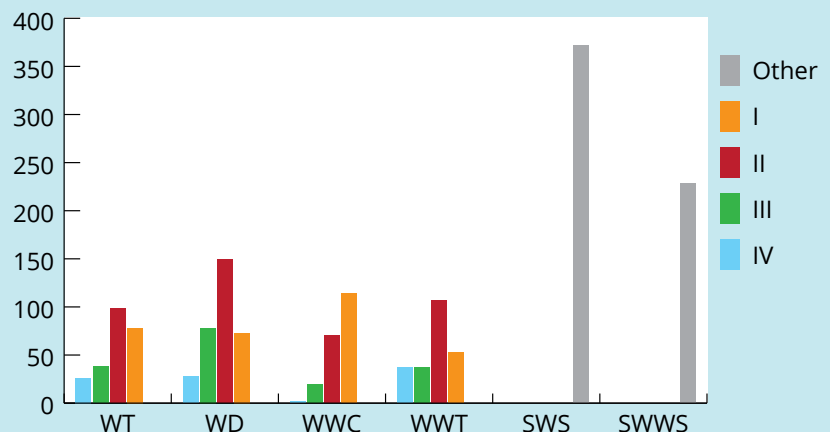
Check your Operator status by logging into your profile at <https://crm.eocp.ca/> and clicking on **ACCOUNT** to see if your 2023 dues have been paid, and **CEU** under the **LEARNING STATUS** tab to see if your CEUs have been met.

If your CEUs have not been met for the 2020 - 2021 reporting period, and/or your dues haven't been paid for 2023, your status will be red flagged and you will be listed as not certified.

Operator Certification



Facility Classification



WATER & WASTEWATER OPERATOR TRAINING

**CLASSROOM OR INSTRUCTOR LED
VIRTUAL TRAINING**

Certification courses
support new ABC criteria

**MTS Maintenance
Training Systems Inc**

&

**CROSS CONNECTION CONTROL
PROGRAM DEVELOPMENT SERVICES**



**www.mtsinc.ca
250-503-0893**



Designed for Operators, by Operators
3 Streams – Water, Wastewater and Leadership

LEARN. EMPOWER. INSPIRE.



The 2023 EOCP Hybrid Conference program will be jam-packed with two full days of training worth up to 1.2 CEUs. Attend in person (in Vancouver) or online!

**The registration portal opens
on the 1st of May 2023!**

What #EOCP2022 attendees said:

- “Thank you, I enjoyed the event very much. There were diverse topics, interesting conversations, and the food was excellent.”
- “Very great, more than I thought it was going to be.”
- “I was very impressed with it all, I've already got the go ahead to attend in person next year. See you next year!”
- “Great Tradeshow - much needed Information.”

For more information and
to register, check out
eocp.ca/eocp-conference/



EOCP
Environmental Operators
Certification Program

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