# OPERATOR **JGEST**

## **SPRING 2019** | NUMBER 140



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

# **EMERGENCY RESPONSE** TEAMORING INTERVIEW OF THE OF OTHER TEAMORRY AVERTS DISASTER IN SQUAMISH Sometimes they go from bad to we in a hurry. How you react, and he rely on your team in those situation make all the difference. The Distri-Squamish shares its experience.

Sometimes things don't go as planned. Sometimes they go from bad to worse in a hurry. How you react, and how you rely on your team in those situations can make all the difference. The District of

# **FREE MAY 9** WORKSHOP

Earn CEUs and learn how to make your wastewater plant more energy efficient.

# **OPERATOR** PROFILE

Lyle Painchaud, Level 2 Wastewater **Operator**, City of Penticton.



# VOTE **EOCP ELECTIONS**

Voting will end May 21, 11:55 pm.

P7



# 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

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

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# **OPERATOR PROFILE**

# Lyle Painchaud

Wastewater Operator, City of Penticton



How did you became an Operator? I started out working for the Resort Municipality of Whistler in 1989 in the Utilities Department as a seasonal employee. When my season was over, I was absorbed by a construction company to work as a labourer for the winter. The neat thing was, they were building an expansion on the Wastewater Treatment Plant that shared the same yard as Utilities. Gord Goldsworthy was an Operator there at that time and he saw that I had a great interest in the Operator field. While I was helping with the expansion, this helped feed the flame of interest. When Spring came around and it was time to go back as a seasonal for the RMW Utilities, Gord wondered if I would be interested in working there instead. The rest is history...best choice I ever made!

#### How long have you been an Operator?

Since 1990, however I took a 13 year hiatus doing drywall/painting with the family business and re-entered the wastewater industry with the City of Penticton in 2007.

#### What do you most enjoy about the

**work?** Practically everything. There are many fields of interest in wastewater treatment. I have to be honest and say that lab work is the most captivating, because from there you have the knowledge of the plant's anatomy at heart. Learning how to provide an environment conducive to the reproduction of microorganisms is a hoot. Of course each individual plant has its own design for processes. This makes the challenges vary from plant to plant. I could go on forever, but I'll cut to the chase and say that tearing pumps and equipment apart make for an exciting day also. We also get the opportunity to work on Penticton's eleven lift stations once a week.

## What has surprised you most about

**your job?** The actual technical aspect, which is ever evolving, is amazing. People are coming up with new and innovative ideas every day.

What do you wish other people knew about working as an Environmental Operator? Exactly what it is that we are trying to achieve. Let's face it, I can assume most people don't go around thinking every time they flush the toilet, where it goes, and how it is handled. I know I didn't until this opportunity presented itself to me.

Continued on page 10



### WATER & WASTEWATER PROFESSIONAL TRAINING

Kwantlen Polytechnic University offers relevant and industry recognized training in the water and wastewater sector.

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# **MESSAGE FROM THE DIRECTORS AND STAFF**



Brian Dean, Chair

Kalpna Solanki, CEO

We are into the second quarter of 2019 already, and it's getting close to time for elections for some new Directors for the EOCP Board. We are very encouraged by the level of interest by our membership and stakeholders in being an EOCP Board Director and contributing to the water and wastewater industry. Please see Page 7 to find out more about our candidates, and the voting process – please be sure to vote between the 22nd or April and the 21st of May. Results of the election will be announced at the EOCP's AGM on the 19th of June.

After much planning and hard work, the largest project ever undertaken by the EOCP, the Customer Relationship Management (CRM) system is now fully operational. As a follow up component of this, the EOCP has been holding webinars to ensure that users know how to set up their profiles and access the system. Please check our website to find out more about current and upcoming webinars. The EOCP's new CRM is best of class in North America for a water/wastewater classification/certification organization and would not have been possible without an excellent consulting firm, a dedicated staff team, and support from the EOCP Board and Ministry of Health.

For several years, the EOCP has been offering Industrial Wastewater Treatment (IWWT) certification for Environmental Operators. These IWWT certified Operators, upon employment in a Municipal Wastewater Treatment (MWWT) facility can then apply for MWWT certification. Upon review of practices in other jurisdictions in Canada, and consultation with academics, as of July 2019 the EOCP will be amalgamating the two certifications such that there will only be Wastewater Treatment (WWT) exam and certification for Levels I to IV. This has the potential of increasing the number of Environmental Operators in the industry, and better protection of the environment.

Before we know it, it will be September 2020, and that means it's time for the EOCP's second Tradeshow and Conference! The EOCP's inaugural Tradeshow and Conference event last year was a tremendous success, and was sold-out, so make sure you have it in your calendar. We will send out more details in a few months, but in the meantime, please save the date: 14th to 16th September.





Thompson River University Graduates.

Whilst there is a shortage of Environmental Operators, we were elated to recently meet with students and graduates from both Thompson Rivers University as well as Okanagan College. Environmental Operators are an essential part of effective water and wastewater treatment and we know that the graduates from these programs will be going on to enhance the communities they will soon be part of.

This newsletter is your newsletter and it enables us to share information on developments that affect the water and wastewater industry in BC and Yukon. We appreciate feedback from you on who's on the move, whom to profile, which plants to profile, and innovation in the workplace – so please do keep in touch! We are honoured 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.

Brian Dean, Chair Kalpna Solanki, Chief Executive Officer



Okanagan College students.

**EMERGENCY RESPONSE** 

# **DISTRICT OF SQUAMISH**

#### by Jenni Green, EOCP Technical Expert

The District of Squamish is a rapidly growing community, located about halfway between Vancouver and Whistler. The current population is just over 21,000. Less than 10 years ago it was 15,000, and it's projected to hit 30,000 by 2040.

In 2005 following a major upgrade at the Mamquam Wastewater Treatment Plant (WWTP), the District of Squamish made the decision to retain the old bioreactors and clarifiers as a means of redundancy for the new circular combined treatment unit (CTU) that had just been installed, and also to have added capacity during the wet months. It was a decision that would serve them well in the years to come.

Fast forward to January 18, 2018. A fairly standard winter day in Squamish - grey, cold, and heavy rain. One of the wastewater treatment plant Operators immediately knew something was wrong when she heard the clarifier 'howling' and 'clunking'. The sound of metal on metal is not typical of the skimmer as it makes its slow lap of the tank. As with most mechanical failures, there were a series of things that went wrong. A shear pin failed to shear, and an over-torque sensor didn't trigger the alarm. The exact cause of the failure is still unknown. As the Operators guickly reacted, the clarifier was twisting itself into scrap metal. Luckily, the team stopped the machine before the damage could get any worse.

With an average daily flow of just over 8,000m3/day that can double during the rainy winter months, the operations team knew it needed to act quickly. At the time of the failure, the CTU was treating 90% of incoming flow.

Chief Operator, Scott MacIntyre started to bring the old treatment train back online. The 'old side' consisted of four bioreactor tanks, two of which were already running to deal with the high seasonal flows. Scott worked to divert the water from the failed CTU to the old tanks. A 6" x 6" diesel pump was onsite within 24 hours.

Coincidentally, engineers from MPE Engineering were onsite completing a capital project to upgrade the controls at the facility and were able to work with the Operators to bring the old treatment train back online. The volume of incoming flow exceeded the design capacity of the process train, however MPE was able to create a program which allowed a single dissolved oxygen (DO) probe to operate all four tanks. MPE also helped to set up a return activated sludge (RAS) flow monitor.

Due to the volume of inflow and infiltration reaching the WWTP from all the rain, the secondary clarifiers were short-circuiting during peaks. When the inflows got excessive, the RAS was reduced, which reduced the mixed liquor suspended solids (MLSS) and was very helpful. Flocculent was added to the secondary clarifiers to improve settling before flow reached the The Rebuild team in Squamish: Operators, Local Millwrights and Contractors.



Twisted metal: the result of a failed fail-safe.

weirs. With some programming tweaks, a plant with a capacity of 5,000 m3/day was running at 10,000 m3/day and meeting permitted discharge parameters.

Everyone on the team really came together. The Director of Public Works, Bob Smith took the lead on communicating with

# **LESSONS LEARNED**

### Redundancy

You need it not only within your facility, but also within your organization. This failure would have been catastrophic if Squamish did not have trained Operators ready to take over and support each other. The depth of the team saved the day.

## Don't go into Autopilot

A clarifier like this should have a useful life of 40-50 years. This one wasn't even 15 years old. Drain your tanks fully and do complete inspections including the ironwork at regular intervals.

## Transparency

When something goes wrong, be forthcoming with your colleagues, your supervisors, Council, and also the MoE. Get help quickly and notify the right people.

# Bring on the right people

The District hired a local millwright and welder, not only saving money but also keeping the expertise in town if further repairs are needed. MPE helped to quickly program the old side to be more efficient with the added flows. A local crane company was hired directly again, saving money and now the model of crane and hoisting locations are known for future work.

## What is your emergency plan?

Test it. Figure out what you are going to do in an emergency. Test your fail safes. They can fail too. The repair in Squamish was a 'hurry up offence' and it still took five months. Manufacturers and suppliers were only interested in providing a new piece of equipment, not repairing an old one. How would you operate your facility for five months with a major component offline? Engage local expertise, then you have that expertise close by, and they can be there in an emergency.

Damaged metal removed from the bottom of the tank.





Craning out suspended clarifier influent baffle.

Council and the Ministry of Environment (MOE). Scott took the lead on continuing operations on the 'old side' while Utilities Supervisor Chris Stanger and Wastewater Collections chief Operator Dan Arnold were in charge of the repair work and getting the CTU back online as quickly as possible. The District Communications department did a press release to the community to keep the public aware of what was happening.

The CTU consists of a clarifier surrounded by a bioreactor, a wastewater treatment 'doughnut' if you will. This is a common approach when working within a small footprint. Often during the design and commissioning phases of a project, a small footprint is a positive. However, due to the design of the clarifier, the bioreactor also needed to be taken offline. During the repair the team noted that the apparatus was constructed with angular steel, which may have led to the failure. Furthermore, there were signs of older smaller failures on the angular steel thus weakening the entire structure. The repaired clarifier now contains new tubular steel as recommended by Westpro.

Throughout the entire emergency, the team was laser-focused on compliance with the MOE operating permit, allowing for total suspended solids (TSS) of 40mg/L. Sampling was completed daily throughout the repair work to prove compliance (normally only weekly samples are required). The MOE was helpful and engaged, and worked closely with the District to ensure protection of the environment.

The Squamish team looks back on this emergency event in a positive light and is reflective about the lessons learned along the way. The clarifier was brought back online and has been running at full capacity for close to a year. The whole process has been an incredible training opportunity for the Operators, the management team, and the rest of the District staff.

Looking into the clarifier on a sunny day in Squamish before the failure.



# THE RISE OF WATER



47<sup>TH</sup> ANNUAL CONFERENCE & TRADE SHOW May 26 – 28, 2019 | Victoria, BC

# THERE'S SO MUCH FOR OPERATORS TO LEARN AND DO AT THE 2019 BCWWA ANNUAL CONFERENCE & TRADE SHOW

The schedule at our 2019 Annual Conference & Trade Show is packed with informative education sessions, networking opportunities and demonstrations of the latest technologies in the water sector. While all of the content is applicable to anyone working in the water sector, we have developed significant portions of the program specifically for operators:

#### **OPERATOR EDUCATION PROGRAM**

An entire day of programming has been curated for operators of all kinds of water systems. These workshop-format sessions will include best practices and real-life scenarios to help you get the job done.

#### **OPERATOR CHALLENGE**

This friendly competition is designed to recognize the outstanding performance of water and wastewater operations professionals, while sharing skills and knowledge in a high-energy environment. Teams of three operators will compete in four round robin events and a trivia challenge to find out which will be crowned the 2019 champions!

#### **OPERATOR RECEPTION**

Connect with other operators from across BC and the Yukon and see the crowning of the Operator Challenge champions. A reception ticket is included with all Operator Delegate passes.

# **REGISTRATION NOW OPEN**

Visit us at www.bcwwa.org/pro-d/annual-conference for pricing information and to register today!

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# **BOARD ELECTIONS**

The EOCP's Nominations Committee is pleased to present the candidates for the 2019 Board Elections.

Three Directors are needed as per the EOCP's Constitution and Bylaws.

**ONE POSITION** to be filled by a person who advises or has advised in the operation or design of facilities that treat water, waste, or wastewater. The candidate, acclaimed to the position is Peter Coxon (incumbent).



TWO POSITIONS to be filled by members who are EOCP certified Operators









a. Maurice Valcourt (incumbent)

b. Anna Agnew

c. Darryl Bjorgaard

d. Chris Kerman

e. Christopher Lawrence

# Voting is already underway and will end at 11:55 p.m. on the 21st of May.

Successful candidates will be announced to the membership at the EOCP's AGM which will take place at 11:00 a.m. on the 19th of June. Please note that only EOCP certified Operators are eligible to vote.

Please visit <u>https://eocp.ca/</u> to find out more about each of our candidates. To vote, please use the link sent in your email and vote via the Customer Relationship Management system.

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# WHO'S ON THE MOVE

# Jim McQuarrie

EOCP Certified Wastewater Operator.

Jim McQuarrie, an EOCP certified Wastewater Operator since 1982, is retiring from Metro Vancouver. Jim attended Malaspina College in Nanaimo in 1982 in the water wastewater technical course. His career started after graduation in late 1982 at Iona WWT plant as an Operator trainee, upgrading to a level IV in the 1990s. Jim worked his entire career at Metro Vancouver, moving between Iona, Lulu, and Annacis Wastewater Treatment plants; finishing his career as the Superintendent of the Lulu WWT plant in Richmond BC.

During this time Jim took multiple courses to upgrade his management qualifications, and Power Engineering at BCIT. Jim started volunteering with the EOCP as it worked with independent course providers to develop training programs that would allow Operators to get the CEUs required to maintain their certification. This led to Jim joining the EOCP as a Board Director in 2016. Working in the industry for the last 36 years and looking back at the changes that include everything from regulatory challenges, safety regulations, and computer automation, Jim feels that all of these have had a profound effect on our industry. Looking forward, he sees more opportunities for the industry than ever before. There is a huge shift in staffing as the baby boomers leave and open up positions for new talented younger people. This along with the expansion of the wastewater plants in the province, he feels, will also add to the opportunities for wastewater Operators. He indicated that this should be a good time as ever for young enthusiastic Operators in this province.

One of the new opportunities that he will be keeping an eye on will be the work on genomics within the wastewater field. Research is just starting within Metro Vancouver in this area: "The function of different microbes in the various biomasses is not fully understood. Understanding the underlying microbial communities in our systems will result in future Operators gaining a new perspective on managing and manipulating these biomass systems. It



is my opinion that this development will have a profound effect on the industry, similar to other technologies I have seen over the years."

As for his retirement, he plans on some travel and is currently building a retirement home on Vancouver Island. He expects to be fairly busy with that and keeping up with his two grandsons.



# FREE FULL DAY WORKSHOP MAY 9

Graphic shows the main elements of the WEC program.

# Earn CEUs While Learning Techniques to Lower Your Energy Costs





Years

Energy teams

Workshops

Energy models Optimizing equipment

Energy performance

tracking



support

Capital project

development and

implementation

On May 9, at Metro Vancouver's Lulu Island Wastewater Treatment Plant, wastewater Operators will gather for a full-day workshop to kick-off BC Hydro's new energy efficiency program: Wastewater Energy Coaching. This is an incentivized, no-cost energy efficiency program designed specifically for eligible water resource recovery facilities and the professionals who operate them.

Wastewater Energy Coaching (WEC) is a specialized, two-year engagement that will help O&M staff reduce their plant's energy footprint through low- and no-cost operational improvements. The program will be delivered by wastewater industry veterans and energy experts from Cascade Energy. Cascade has delivered this program to more than 40 wastewater facilities in the Pacific Northwest, where plants have saved from 2% to more than 20% in their first year.

By way of example, the Lander Street Water Renewal Facility in Boise, Idaho participated in a WEC program sponsored by Idaho Power starting in 2014. During the program, the team investigated several of their practices and found multiple efficiency measures that could be implemented. They optimized their DO levels and reduced aeration energy significantly through a combination of DO profiling, repairing valves, and investigating different modes of operation. After learning the value of energy savings possible, they repaired and returned their biogas-powered influent pump to baseload service. They experimented and provided data to support a request to remove their post-aeration blower from service, since the cascading falls between the plant and the river added more than enough oxygen to meet their permit. They also investigated their UV system and returned it to a semi-automatic mode, rather than purely manual, as a step towards returning it to full auto. Taken together, the Lander Street energy team saved over 17% in the first year on a baseline energy use of more



Idaho Power Cohort at First Workshop.

than 7.5 million kWhs annually. That's the equivalent of knocking two months of energy bills out of their annual budget!

The WEC program is primarily delivered through a series of workshops in which a group, or cohort, of wastewater facilities will learn how to save energy together in an open forum. The workshops will be led by a pair of coaches including a wastewater industry veteran and an expert in organizational change. There are five full-day workshops in the first year, and two workshops in the second year. Between the workshops, coaches will check in and provide help to each facility on an individual basis.

In addition, the coaches will facilitate and lead a full-day energy scan at each participating plant. The goal of the energy scan, or treasure hunt, is to identify as many energy saving opportunities as possible, then categorize and prioritize them so that the energy team can start moving immediately towards lowering the energy bill.

#### A program summary is available at https:// cascadeenergy.com/wp-content/uploads/ pdf/bchydo-wec.pdf.

On one hand, WEC is about people and changing our behavior when appropriate.

Because every plant has several people that work together to manage, operate and maintain it, the first thing to do is form an energy team. The coaches will help each team select an energy champion and other roles, as well as help set an energy savings goal. Later in the program, coaches will work with the energy team to help engage the entire crew, so that every decision in the facility is made with acknowledgement of the impact it will have on energy consumption. In the longer term, coaches remain involved to ensure the energy team has the support it needs to produce a strong pipeline of future energy-saving ideas.

On the other hand, WEC is about technical training and process optimization. In the first workshop, participants learn how to read their power bill, learn what demand charges are, how they are calculated, and how they can be reduced. Then they'll learn how to calculate the cost of each motor, heater, or other electric load in their plant. By looking at the facility through the lens of energy, Operators learn to question processes that tend to be taken for granted. For example, if the volume of a tank varies, shouldn't the energy put into mixing the contents also vary? It is all about optimization of

#### Workshop continued from page 9

each unit process within the plant, from headworks through disinfection. In most facilities, the activated sludge process, including the aeration equipment, represents the largest single load, but time will be spent on pumps and pumping systems, mixers, non-potable water, compressed air, odor control, and yes, HVAC and lighting. The whole point is to question that old standby: TTWWADI – That's The Way We've Always Done It!

It should be noted that operational costs can be reduced WITHOUT impacting safety, water quality, or reliability. In fact, as alumni of the program will attest, their plants typically run better (improved treatment, lower maintenance costs, and enhanced resource recovery) after they've completed the program. Check out the Wastewater Program Alumni here: https://cascadeenergy.com/wp-content/uploads/pdf/ bchydro-wastewater-alumni.pdf

The full WEC program is offered to eligible BC Hydro customer wastewater facilities that consume more than 4 million kilowatt-hours (4 GWH) of electricity annually. That's an average electrical load of around 450 kW, or 600 hp. However, in the interest of engaging the industry, BC Hydro has opened the first workshop on May 9 to Operators and managers from any size Hydro customer facility. Again, if your plant gets electricity from BC Hydro, you are welcome to attend the first workshop.

For more information, please contact Martin Lott at <u>martin</u>. <u>lott@cascadeenergy.com</u>, or contact your BC Hydro representative. You must RSVP for the May 9 workshop before May 3, and spots are available on a first come, first served basis. A light breakfast and full lunch are included.

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#### Operator Profile continued from page 2



**Can you tell me about any initiatives you have been involved with?** One small suggestion I made for our plant is field trips. Once a week (Wednesday) we have our OPs/Tech meeting. The first Wednesday of every month, a rotating Chair will take the crew on a field trip of their choice to different parts of the plant. It's a good chance to see that we are on the same playing field. Also, I was lucky to be chosen as a representative for the YouTube special 'People Behind The Water'.

What are some opportunities regarding the field of Environmental Operators? There are many facets in this field. Water, Wastewater, Engineering, Production, Sales, and even Public Relations. I am sure there are more.

What do you do when you aren't working? Living the dream. I ride a motorcycle, so it doesn't get any better than that. Also, I live beside a river, so that's tough to take in the summer!

What else can you tell us about working as an Environmental Operator? If you have a passion for this type of job, and make it your choice for a career, you won't regret it. It is very satisfying to know that the water we put back into the environment is safe.

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# **BEATING WATER LOSS WITH TECHNOLOGY**

By Karen Siu, Solution Manager, Kamstrup Water Metering LLC

# Trying to reduce water loss can feel like a lost cause if you don't know where to start or where your efforts and investments will have the biggest impact.

**Smart metering** creates transparency in your distribution network to help you localize different types of Non-Revenue Water and adapt a more proactive approach to fighting your water loss.

Increasing levels of Non-Revenue Water (NRW) and water loss are among the many challenges facing the water industry and consumers today due to increased urbanization, higher demand and aging infrastructure. Combined with the effects of climate change seen in recent years, such as droughts and floods, this development calls for a more responsible use of this valuable resource. And while preserving our natural resources is everyone's responsibility, as a water professional, this is literally your business.

In addition to the loss of revenue from distributing water that isn't billed, the consequences of a high level of NRW include higher operational costs. Leaks necessitate expensive repairs of the infrastructure and could potentially result in a need to expand the network capacity. As the energy used to pump out NRW is pure waste this also causes a significant financial strain. Metering in itself does not solve the problem of NRW, but you can't optimize what you don't measure. With smart metering utilities get detailed knowledge about their distribution network. This provides the basis for making informed decisions about the most efficient way you can work proactively with water loss.

# The complexity of Non-Revenue Water

NRW is many things. From a hidden leak inside the home of one of your customers, or unmetered water use in a residence or at a construction site, to an illegal connection at the main. It could also be metering inaccuracies caused by aging mechanical meters or human errors in the meter reading process. Different types of water loss must be addressed in different ways. Case in point: if the majority of water loss in one of your districts comes from unmetered water use, upgrading distribution lines will not solve the problem.

Today, limited knowledge of what goes on in the distribution network means that water utilities often base their efforts on a combination of theoretic models, guesses or trial and error. But reducing NRW and water loss becomes much easier and more efficient when you have the right information available at the right time – to the benefit of the environment, the consumers and your bottom line.

# Data creates transparency

With smart metering, you can distinguish between real losses (leaks) and apparent losses (metering inaccuracies and unmetered



consumption) per district in your supply area. This allows you to easily isolate where the unmetered water use is occurring, for example, residential and commercial sites, so you can spend your resources tackling the water loss that is preventable.

Smart metering is a constant source of valuable information about the state of your network that makes it possible for you to act accordingly. Let's look at three areas where smart metering helps you reduce NRW.

Beating Water Loss continued next page





# The Online Help Centre for BC Small Water Systems

Find technical advice and self-help tools to help you deliver safe drinking water. Covers topics on treatment, regulations, operations, maintenance, water quality monitoring, emergency response planning and much more.



# smallwatersystemsbc.ca



Beating Water Loss continued from previous page

## Lifetime pinpoint accuracy

At the core of smart metering is the meter itself. Unlike mechanical meters, an ultrasonic meter has no moving parts. This means that it is unaffected by wear and tear and maintains precision throughout its entire lifetime. In addition to ensuring fair and accurate billing, this also enhances the quality of your data.

A mechanical meter has a higher start flow than an ultrasonic meter. Therefore, more water is consumed, but not billed. The accuracy and low start flow of ultrasonic smart meters on the other hand limit the amount of water consumption that is not measured and not billed. High accuracy – even at low flows – is crucial to water conservation and revenue protection, because it ensures that every single drop is accounted for.

## **Reliable meter reading**

In addition to being very time-consuming, manual meter reading is costly and error-prone, which impairs the foundation on which you base your decisions. Smart water meters include remote reading capabilities that allow you to significantly reduce both the time and costs related to meter reading. You can eliminate re-reads, time-consuming follow-ups and estimated billing.

As you are able to get data more often, you can also increase the interval of your water balance from yearly to monthly or even daily with automatic meter reading. This lets you discover issues within your network as they develop rather than reacting after the problem appears. The more frequent data you have, the more transparent your distribution network becomes and the more proactive you can be.

## Intelligent alarms

Smart meters transmit intelligent alarms that let you discover and react to irregularities quickly. Fast detection and localization of leaks and bursts is especially critical to reducing NRW and water loss and this effort can be improved significantly through specific leak monitoring and alarms in smart meters. Smart meter data, ex. water temperature, also allows you to better assess the risk of leaks related to damages from frost so that you can prevent them from happening. This saves both water and money while minimizing inconvenience for your consumers.

Other notifications and alarms can include unexpected occurrences such as theft and tampering attempts. This enables you to quickly take the necessary actions to prevent revenue loss and protect your network as well as your customers. If you read your meters remotely, you either get the information when an alarm is triggered or as soon as you read your meters via drive-by.

# Where do you start?

In the fight against NRW, technology is a given. The right gear will equip you to not only understand but also overcome this challenge. The first step to reducing water loss and ensuring a sustainable water future is having data available to make confident decisions about your smart water network.

# 

Formerly BG Controls

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# **LEADING FROM THE FRONT LINES**

Chris Anderson, AScT, ELA Class X

The City of West Kelowna is a young city in British Columbia that incorporated on December 7th, 2007. As the Public Works Manager for the City of West Kelowna (CWK), I have been fortunate to have been with the city from almost day one, and through this time I have seen our team work through many positive and challenging situations.

Recently, I was 'voluntold' to represent the Engineering and Public Works Department as a member of the CWK's Customer Service Committee. At first, I must admit that I was initially slow in my buy-in and skeptical about the intent of this important committee. During this stage of my career, I wasn't in a leadership role for the city, and I remember thinking "what am I doing here?". However, I found myself getting engaged rather quickly as I began to realize the importance of what the CWK's leadership team was hoping to accomplish. Our Committee was tasked with setting the service standard for our young municipality. Over the course of a few months it became clear to us that we wanted to establish a set of service standards by which all CWK employees are to guide their day to day actions and activities as a part of the municipal team.

So, after a few months of honest discussion, consideration, review, and debate, the CWK's Customer Service Committee was pleased to roll out "Our Commitment to Customer Service". Posters outlining this commitment have been put up at strategic locations throughout various CWK locations to make them visible to both internal and external clients of the City of West Kelowna. Here is the "Our Commitment to Customer Service": City of West Kelowna Staff Will

- Welcome our Customers
- Be Respectful and Courteous
- Listen
- Be Responsive and Accountable
- Make it Simple
- Strive to Continuously Improve

When thinking about these 6 commitments, it's easy to draw the link between the commitments that we make as a team member of CWK and how they affect our team of Public Works professionals who are leading from the front lines in the community daily. For CWK, this team includes Parks, Utilities, Roads and Drainage, and Facilities. From our welcoming front desk staff, to the qualified and professional operators in the field, right on through to the responsive and accountable supervisory and management team, these 6 commitments are what drive CWK Public Works as customer service leaders in the municipality.

When thinking about "leaders from the front lines" however, how can this statement not be true for the millions of public works professionals working on the front lines of all municipalities throughout North America? These dedicated team members on the front lines are the faces of our organizations who have the challenging yet rewarding job of leading our cities and municipalities through the ups and downs of providing our citizens safe, enjoyable, and reliable services and spaces that everyone should be proud to call home. Yes, of course, there are always the typical clichés of Public Works: the tap turns on and water comes out, then that water disappears down the drains without question, the roads are plowed in order to get to work safely, garbage cans are emptied regularly, parks/trails/

pools/libraries are clean and safe, the list goes on. But my point here is that all of this doesn't happen without our front line public works leaders who help navigate our cities through the day to day needs of the communities we serve.

As it relates to the City of West Kelowna's "Commitment to Customer Service", let's take a quick look at the 6 commitments and how they can link to the CWK's front line leaders in Public Works:

#### Welcome our Customers:

How simple is this one? A simple "Hello, nice to see you!" or "Hi, I'll be right with you" can go a long way in easing any possible tensions or welcoming a client back. What a great tool for our reception staff to be using daily, for any public works professional heading into a meeting, or an operator in a park. Say "hello"! This is the simplest thing that one can do as a leader on the front line.

# Be Respectful and Courteous:

Can you hear your mom with this one? "Treat others the way you want to be treated". It's so true though. Our front line leaders in the office or out in the field are expected to behave in this manner and do so excellently. What's great about this the CWK is our corresponding policy, in that we all have the right to walk away, hang up the phone, or take whatever means we see as reasonably necessary when not being treated in a respectful or courteous manner. This is one of the most basic soft skills any leader should possess.

### Listen:

It's amazing how easy it is to listen. After nearly 15 years in local government in public works related challenges, listening to someone, no matter how frustrated they are, and letting them vent might be the single most important tool I've

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learned. Listening, really listening and trying to understand their perspective can go a long way. Ultimately, you may agree to disagree with the person you are listening too, but our leaders on the front lines should recognize the power of listening.

## Be Responsive and Accountable:

If you're going to do something, do it. If you've made an appointment to be somewhere, be there. As a leader on the front line, your client's time is just as important as yours is. So be that leader by standing behind your words and actions. If you can't make your commitments, let your client know that something has come up and you need to reschedule.

## Make it Simple:

One can't argue that part of working in local government is enforcing red tape. But while leading from the front line in whatever public works setting you find yourself, do what you can to make things simple for both your internal and external clients.

## Strive to Continuously Improve:

This may be one of the more difficult commitments to work towards given the tendency of relying on the old saying "if it ain't broke, don't fix it" and the corresponding mentality. But as leaders on the front lines, and considering how times and technologies are constantly changing, striving to continuously improve is as important as ever. This is not only true for all of us leading in the world of Public Works in our day-to-day work lives, but in a perfect world, this same commitment should be true in all our personal lives as well.

In closing, leading from the front lines = what we do as public works professionals every single day of the year. Our Public Works teams are what makes our communities tick, we are the lifeblood of what makes your city the place you want to call home and where you are happy to serve. But our communities could not be these vital places and healthy spaces without the dedicated hard work of our Public Works professionals who are Leading from the Front Lines.

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# **STATISTICS** January 1 to March 25, 2019

The figures in the Operator certification report reflects those Operators who have met their certification requirements for the 2016 -2017 reporting period, as well as having paid their 2019 Operator dues.

We have 9 months remaining in the current CEU reporting period, and Operators have been working hard to get their course completion certificates to the EOCP office before December 31, 2019. So far, 609 Operators have submitted certificates and have earned 1,292 CEUs as of March 25, 2019. That is 12,920 hours of training!!

You can check your status by logging into your profile at

FACILITY	CLASSIFICATION				as of March 25, 2019			
Classification	IV	ш	Ш	Т	Other	Total		

WT	19	42	123	63		247
WD	35	62	172	145		414
WWC	7	22	79	122		230
MWWT	26	31	82	58		197
IWWT	1	1	5	1		8
SWS					901	901
SWWS					215	215
Total	88	158	461	389	1,116	2,212

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<u>https://crm.eocp.ca/</u> and clicking on ACCOUNT to see if your dues have been paid, and CEU under the LEARNING STATUS tab to confirm that your CEUs have been met.

#### **Exam Statistics**

• **177** Operators wrote certification exams in 42 exam sessions between January 1, 2019 and March 25, 2019.

#### Facilities

• **41** facilities were newly classified or reclassified from January 1, 2019 to March 25, 2019.

OPERAT	OR (	ERTI	FICA	TION	as of M	arch 25	5, 2019	
Classification	IV	Ш	П	MUII	Т	MUI	ΟΙΤ	Total
WT	47	88	195	7	311	19	36	703
WD	76	160	666	10	677	19	35	1,643
WWC	15	55	394		561		28	1,081
MWWT	102	102	200	6	243	23	35	711
IWWT		5	20		13			38
BWD								39
SWS								631
SWWS								244
Total								5,090

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