



Multi Utility Certification
What does it mean to me?

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Two new winners!

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MARCH 2010 • NUMBER 119

BRITISH COLUMBIA
OPERATORS

Digest



AGM Announcement

Operators! The EOCP AGM is tentatively scheduled for May 2 at the BCWWA Whistler Convention. Come and show your support or voice your concerns about the EOCP. As of 2010, the EOCP plans to change the location and timing of the AGM annually. If you have any suggestions for locations for future meeting sites, please let us know.

EOCP Addresses Operators Not In Good Standing

A new policy has been implemented by the EOCP to deal with operators “Not in Good Standing.” What this policy means is an operator is no longer fully certified by the EOCP if they fail to meet either:

- Payment of annual dues
- Completion of their Continuing Education Requirements

In the future, a reminder letter/email will be sent to all Operators that have not paid their annual dues for the following year or who have not completed their Continuing Education Requirement for their two year renewal cycle. Operators will have until April 1st of

that year to pay their dues or complete their Continuing Education Requirement.

If an Operator is still designated as “Not in Good Standing” after April 1st, a further letter will be sent to the Operator along with a copy to their employer. A list of all Operators “Not in Good Standing” will be sent to each relevant Ministry every six months. If the Operator is still “Not in Good Standing” after three years they will be considered lapsed from the program.

Please ensure that the EOCP has your correct email and mailing address to ensure no missed communications occurs and that you are able to remain in good standing.

Changes to the EOCP Constitution

Ballots were sent out in the spring of 2009 for proposed changes to the EOCP Constitution. 126 ballots were received with 104 in favour and 22 opposed.

The major changes in the constitution were:

- Name change from previous British Columbia Water and Wastewater Operators Certification Society to Environmental Operators Certification Program Society.
- Creation of Executive Director position within the Constitution.
- Changes to terminology of board members, such as chairperson to become president and the implementation of a vice-president position.

For more information on the changes, please visit the EOCP website at www.eocp.org/constitution.html

Environmental Operators Certification Program

The BC Operators Digest is the official newsletter of the Environmental Operators Certification Program. Submissions for publication in the Digest are welcome. Please email the editor Brian Thorburn at bthorburn@eocp.org. Changes of address, annual dues, exam applications, as well as general inquiries about the program should be addressed to:

Environmental Operators Certification Program

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Burnaby, BC V5C 6N5

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Stephanie Hall Office Assistant
Heather Wallace Office Assistant

Business car-sized ads are available for \$75 per issue or \$250 for four issues, GST included. For ads of other sizes, please contact the EOCB office.

The Environmental Operators Certification Program is a charter member of the Association of Boards of Certification and is a registered society with more than 3,700 active members

2010 Board of Directors

Mike Gosselin – President

Darryl Bjorgaard – Vice President

Pat Miller – Treasurer

Scott Fry – Secretary

Steve Benoit

Shawn Sanders

Tim Lambert

Brian Thorburn

Bob L. Smith

2010 EOCB Certification Board Elections

This year's nominating committee members are **Brian Thorburn, Shawn Sanders, and John Reynolds**.

There are five positions available on the board to be filled by three operators, one employer representative and educational representative. Each position is for a two-year term. The following candidates have been nominated so far:

OPERATORS: **Pat Miller**
Darryl Bjorgaard
Scott Fry
Chris Brown

EMPLOYER REPRESENTATIVE: **Bob L. Smith**

EDUCATIONAL REPRESENTATIVE: **Steve Benoit**

The Nominating Committee invites further nominations from the membership. Each nomination shall be supported by a minimum of three (3) certified operators and shall be submitted no later than April 2, 2010. Ballots will then be mailed out to operators in good standing.

EOCB Elections

The EOCB Board elections are coming up in early 2010. Do you want to make a difference? Do you know someone who you think will make a difference? Nominate a fellow operator for the upcoming EOCB Director Elections in 2010. Any operator that is in good standing is eligible to run for EOCB board director. There are 3 director positions to be filled in 2010! Make your vote count! Contact the EOCB office if you want to nominate an operator for the upcoming EOCB elections.

OPERATORS!

Does the EOCB have your current email address? Please ensure when you renew your EOCB certification to check your email address. If in doubt, please email the EOCB office at eocp@eocp.org.

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The Challenges of Finding Certified Operators

Many managers and supervisors are facing an increased number of operators retiring from the water and wastewater industry. An increasing number of operators within the next five to ten years will be pulling the plug and enjoying retirement after working in the industry for numerous years. Unfortunately, there doesn't seem to be a large pool of qualified and certified operators in the province of BC looking for work.

When I first started out in the water and wastewater industry in the mid 1990's, you could count on one hand (maybe two), the total job postings available within the province. This was also somewhat before the internet so this could perhaps count for the low number of remote postings available. At any given time these days there are at least a couple of postings available for certified operators of which, many are repeat or open postings trying to fill certain positions. This is a great time to be an operator who is flexible and willing to relocate. However, many of us operators do not want to move and relocate to a new position or we can't afford to move to

many of the locations where the job postings are due to housing prices. How do utilities go about finding certified operators to fill these vacant positions?

Some utilities have been very proactive and progressive in filling operator positions for the future. They have begun training and educating their operators years prior to a new treatment process being built to ensure that they have certified and qualified operators in the future when the new process comes on line. Not all utilities have this luxury of investing and training operators for any length of time prior to new positions being created or older operators retiring. Smaller utilities are sometimes hiring locals for positions, knowing that they will not move away once they acquire their experience and certifications. Hiring locals is a great move for some utilities as they can train these future operators and allow them to move up the certification ranks.

Other utilities have increased their benefits or pay for operator rates to try to make job openings more appealing. Some utilities are

basing the operators wages on certifications levels held which can help the more certified operators receive higher pay. With the recent introduction of the Multi-Utility Certification levels, this should assist some of these operators in achieving their higher levels of certification in a shorter length of time.

Some Operators have begun to realize now that to achieve their higher levels of certification, more CEU's are required. These operators have taken any course offered to them through work or have even taken home or correspondence courses through California State or Thompson Rivers University. The more CEU's held by an operator the better off they are when they wish to apply to write their level 3 or 4 exams as this seems to be the major hurdle for some operators when applying to write their upper level exams.

Basically, with shortages of certified Operators in the province, there has never been a better time to be a certified Operator and if there ever is a bidding war for Operators in BC in the future, sign me up!

Multi Utility Certification and what does it mean to me?

Operator I and II certification exams normally take 1 and 3 years in each field to be eligible to write. With the introduction of the Multi-Utility Certification, Operators who work in 2 or more utilities (water treatment, water distribution, wastewater treatment and wastewater collection) can now write their Level I and II exams in Multi-Utility certification much faster. An operator can write a Multi-Utility exam in any of the four certification fields if they meet the following conditions described below. This allows some operators to reach intermediate levels of certification much faster.

To be able to write for a Multi-Utility certification Level I or II, the operator must meet the following requirements:

- The utilities worked in must serve a permanent population of 10,000 or less.
- The Utilities must be classified as a Level 1 or higher facility

- For Level I – Multi-Utility certification – the Operator must have worked a minimum of 12 calendar months in 2 or more utilities (water or wastewater treatment, water distribution, or wastewater collection) of which a minimum of 1,000 hours in 2 or more utilities, and must have worked 500 hours in the utility being applied to be certified in and pass the Level I exam

- For a Level II – Multi-Utility Certification – the operator must have worked a minimum of 36 calendar months in 2 or more utilities, a minimum of 3,000 hours total in those utilities, and must have worked a minimum of 1,500 hours in the utility being applied to be certified in and pass the Level II exam.

To upgrade your certification from Level I – Multi-Utility or Level II – Multi-Utility, once you have reached 1,800 hours work experience (3,600 hours for Level II) all you need to do is to complete the application and forward it to the EOCP office with confirmation of your work



EOCP Director Pat Miller presenting the Multi-Utility Presentation at the ABC Annual Conference.

experience hours. Once approved, you will be issued a new certificate in the category applied for. In fact, the first operator to be granted a Multi-Utility Certificate in Water Treatment has already applied and been granted certification in Level I – Water Treatment.

For more details on this new certification, please contact the EOCP office at eocp@eocp.org

City of Kamloops Distribution System

By Micheal S. Firlotte



Kamloops Centre for Water Quality

SYSTEM PROFILE

History

In just over 100 years, the City of Kamloops water utility has grown from a one-reservoir system built by James McIntosh to one of the most sophisticated water distribution systems in Canada.

How much water is supplied each year? In 2008, approximately 23.4 billion litres were supplied to customers for domestic and commercial use.

Water Source

By the end of 2009 all of the water supplied for the

City of Kamloops will be taken from the South Thompson River with the exception of the Campbell Creek subdivision which is supplied by a system of 5 deep wells. Water from the South Thompson is pumped from the intake structure through 4 low lift pumps and is then treated in the Kamloops Centre for Water Quality (KCWQ), which began operation in February 2005.

Kamloops Centre for Water Quality

The KCWQ is one of Canada's largest low-pressure, enhanced

coagulation membrane water treatment plants and is capable of supplying up to 160 MLD (42.3 MGD) of clean drinking water to its customers, regardless of the turbidity in the raw river water.

How does the treated water get to the customers? At our main River Street High Lift Station, there are eight pumps capable of supplying 120,000 litres per minute into our water distribution system. Four 600 horsepower pumps serve the Valleyview, Juniper, Rosehill, North Kamloops, Brocklehurst, Westsyde, Karindale and Noble Creek areas.

Three 450 hp pumps and one 800 hp pump serve South Kamloops, Sahali, Aberdeen, Dufferin, and Knutsford areas. The Campbell Creek System has five wells in two aquifers, which are capable of supplying up to 10,000 litres per minute to the single reservoir serving that area.

Booster Stations

Booster stations containing more pumps are placed at various elevations to “boost” the water up to the reservoirs. Due to the vast changes in topography, the distri-

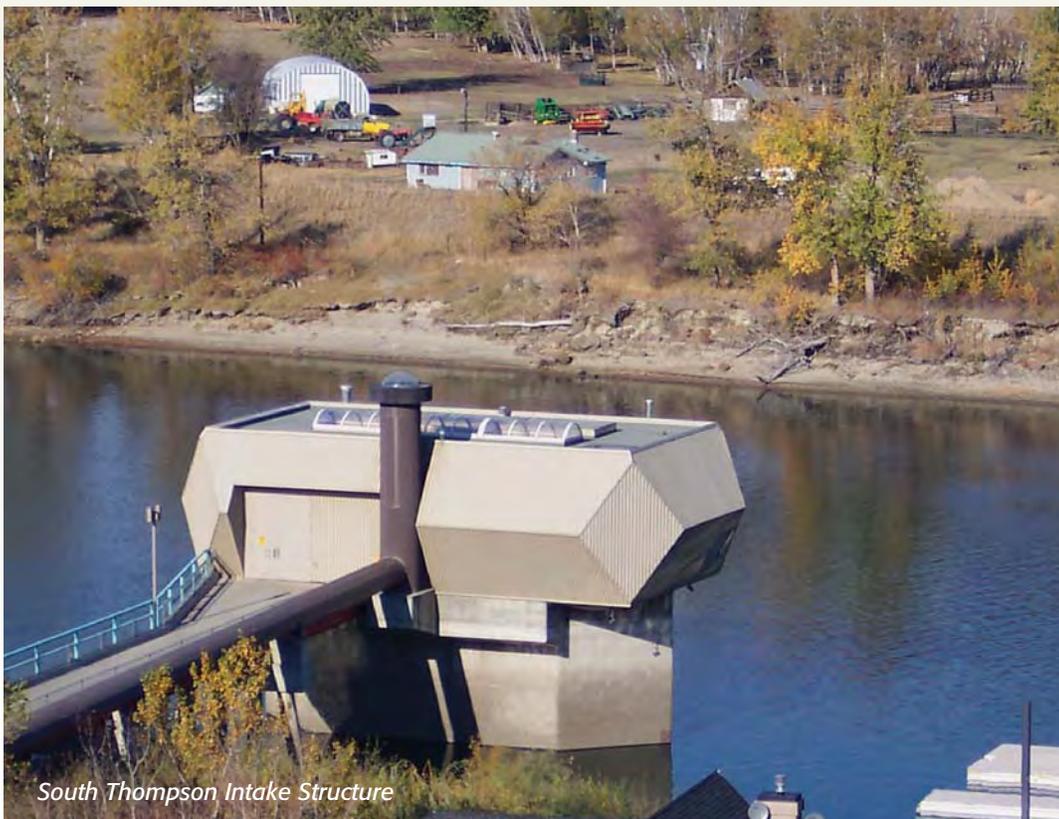


River Street High Lift Station

bution network consists of 60 different pressure zones with 40 booster stations,

44 reservoirs, 520 kilometres of underground pipes and 2200 hydrants.

An extensive network of smaller water lines connected to the main lines run under nearly every street in the city, bringing water to every customer. Boosters and reservoirs are all connected to a SCADA system to help monitor the entire system.



South Thompson Intake Structure

Staffing

Management and administration of the Water and Wastewater Utility are carried out by the Director of Public Works and Utilities, the Utility Services Manager, and 4 Utility Services Superintendents. This administrative staff coordinates all operations and capital works, and relies on a work force complement

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SYSTEM PROFILE

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of approximately 60. Foremen, pipefitters, electricians, equipment operators, water/waste-water operators, millwrights, instrumentation and SCADA technicians are included in this number.



City of Kamloops Booster Station

Operator Profile

Ejnar Laursen – City of Kamloops Utilities Operator I

In 1976 **Ejnar Laursen** started his career with the City of Kamloops, and has enjoyed working with many of the different departments over the years. After completing a number of Sacramento State water and wastewater education courses Ejnar has found a home with the Pumping Facilities division of the Utilities Department.

Typical daily duties for Ejnar include fire hydrant repairs, monitoring of sewer and water stations and water quality sampling. Ejnar is married to his wife Kati and has two wonderful children.



Training Registry

The EOCP Training Registry is currently being launched across British Columbia. Various presentations have been made to stakeholders in the water and wastewater industry within BC. The Training Registry is an online conduit that is comprised of three different sets of tools.

■ **Get Training** – Find out what courses, instructors, and organizations are available in your location.

■ **Give Training** – You can become a recognized instructor by following the simple process.

■ **Grow – Career Info** – Think about career paths and how to get where you want to go.

One of the best features of the Training Registry is the improvement of opportunities for in house training. As all Operators are aware, some locations within the province do not have the same training opportunities of some of the larger cities. With the launch of the Training Registry, certified In House training is more than just a possibility. If you are knowledgeable in a wide array of subjects, enjoy teaching or mentoring fellow Operators, here is your chance to make a difference. You can earn CEU's and provide CEU accredited training to

your fellow Operators by following a simple process. Visit the EOCP website at www.eocp.org for more information or email the Training Registry at trainingregistry@eocp.org.



One of the various Training Registry Roadshows put on in the past year.



View of Britannia Mines Water Treatment Plant Clarifier and Howe Sound.

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website and click on
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EOCP Bursary for Post Secondary Studies

Operators do you know of students enrolled in a full-time water or wastewater program at a college or university in British Columbia such as Okanagan College or Thompson Rivers University? The Environmental Operators Certification Program offers a bursary for students to go towards their studies. Contact the awards department at your college or university for more details.



2009 Okanagan College Bursary Winners **Kody Kont** and **Ryan Swan** along with EOCP President **Mike Gosselin** (centre).

2010 Association of Board of Certification (ABC) Annual Conference

The Environmental Operators Certification Program of BC was well represented at the ABC Conference in January 2010. BC currently has two board of director positions out of thirteen on the ABC Board. Bill Hyslop and Brian Thorburn currently sit on the board for 2010.

The annual conference was an exciting event as certification news and regulation were discussed daily. As well, EOCP Director, Pat Miller presented a paper on Multi-Utility Certification which was well received.

Laboratory Technicians
 ABC offers voluntary laboratory certification. If you are interested in becoming certified as lab technician, please visit the ABC website at www.abccert.org for more information.



Operator Challenge Whistler 2010

Operators, get your team ready for the Operator Challenge this year at the BCWWA Conference in Whistler. Categories include:

- Large Pump Tear Down
- Small Pump Tear Down
- Top Ops Knowledge Contest

Whether you are on a team or a single contestant. We can find a team for you. Come join in the fun. Contact BCWWA for more information!

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Operator Question

I want to write my level 3 operator exam in water distribution but am told that I do not have enough CEU's to write it. I have been a Certified Operator for 15 years; shouldn't I be able to write my level 3 exam?

In order to be eligible to write an Level III exam in water distribution, you will require the following:

- High school diploma or GED
- 2 years post secondary education or 90 Continuing Education Units (CEUs)
- 4 years experience at a Class II or higher water distribution system
- A valid Level II Certificate in Water Distribution

You may substitute 1 years of Direct Responsible Charge (DRC) in a Class II or higher water distribution system for 45 CEUs. You will still require one year of post secondary education or 45 CEU's at minimum in order to write a Level III exam. If you have any questions concerning eligibility to write any level certification exam in any field please refer to the Environmental Operator Certification Program Guide found on our website at:
<http://eocp.org/docs/guide.pdf>

Roughly 25% of households use septic systems to dispose of their sanitary waste. This represents 10% of the wastewater flow generated.



Shoring Tips

- Trenches greater than 1.2 metres must be shored or sloped at an angle greater than $\frac{3}{4}$ horizontal to 1 vertical or have a professional engineer sign off on the bank stability
- Some trenches can be classified as a confined space
- Ladders must be placed within trenches with the ladder 1 metre above ground

DID YOU KNOW?
Many certification boards in various states and provinces offer only 1 or 2 exam sessions annually.

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Operator Certification Sample Questions:

- Tastes and odours from phenolic compounds may be _____ by chlorination.
 - decreased
 - increased
 - removed
- Air binding is a condition that may occur as a result of :
 - filter bed compaction
 - gravel displacement
 - negative head
 - reaching terminal head loss
- The influent into the water plant has high colour and a turbidity of 0.05 NTU. What can be done to improve flocculation?
 - add more alum
 - add more ozone at flash mixer
 - increase chlorine dosage
 - use iron salts for the coagulant
- Red water is experience in one water main while no problem exists in the system. Laboratory tests show that the water is not corrosive. You should check.
 - temperature in all piping
 - piping for excessive scale
 - head loss
 - iron bacteria
- A connection from the municipal water supply directly to the packing gland of a centrifugal wastewater pump
 - is a hazard to the safety of the potable water supply
 - is necessary to dilute the wastewater
 - is undesirable because too much water is required
 - reduces the power consumption of the motor driving the pump
- An efficient primary clarifier is expected to remove what percent of the influent settleable solids?
 - 2 to 6%
 - 20 to 40%
 - 40 to 50%
 - 60 to 75%
 - 90% or better
- Acid forming bacteria would be found predominantly in:
 - aerated grit chambers
 - aerobic digesters
 - anaerobic digesters
 - chlorine contact chambers
- As grit accumulates in a rectangular channel or chamber, the velocity of the influent wastewater:
 - increases
 - decreases
 - remains constant
 - none of the above

- Gravity thickened primary sludge will contain solids within which of the following concentration ranges?
 - 1000 to 8000 mg/L
 - 10000 to 40000 mg/L
 - 40000 to 80000 mg/L
 - 100000 to 400000 mg/L
 - none of the above

Correct answers:

1.b, 2.c, 3.a, 4.d, 5.a, 6.c, 7.c, 8.a, 9.c

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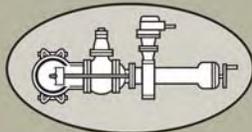
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A German Ran Rust *Anagrams Return*

Below are some common terms found in the water and wastewater field. Email or fax your answers into the EOCP office for your chance to win a prize from EOCP. A draw will be held for the operators who answer the most correctly.

- | | |
|---------------------------|------------------------|
| geld us <u>Sludge</u> | alarms helpful _____ |
| shinned poverty _____ | finalist tot _____ |
| a humane tulip slum _____ | leftwards loins _____ |
| a children demon _____ | a herd west _____ |
| cad tennis fit _____ | a congo rin sims _____ |
| a leather smith no _____ | a frontal inn it _____ |
| a deficit inn riot _____ | a scenic end fop _____ |
| a date rust _____ | a herd fin try _____ |
| echo phil troy _____ | a rain sty _____ |
| fire rot _____ | chime thor lip _____ |
| seed grit _____ | cigar no _____ |
| olivia not _____ | me trip _____ |

Congratulations to our previous Anagram winner, **Lloyd Ryan**, a SWS operator from Lund, BC!



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