

OPERATOR DIGEST

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

Photo by Mark Seidel

PLANT PROFILE

PRINCE RUPERT'S INNOVATIVE WASTEWATER TREATMENT SYSTEM

P13

OPERATOR PROFILE

Susanne
Bergler,
CWP

P2

EOCP EXAM UPDATES

Coming
July 2025

P5

WORKFORCE VALUE SURVEY

What today's
Operators earn

P8

Q&A

Introducing
Gulmira
Turginbayeva

P16

DRINKING WATER SUMMARY

Canadian
Guidelines
Update

P17

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

Changes of address, annual dues, Continuing Education requirements, exam applications, as well as general enquiries about the program should be addressed to:

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OPERATOR PROFILE

Susanne Bergler, CWP

How did you become an Operator?

I went back to school in my 30's looking for a new career. I had initially completed a two-year diploma in Environmental Science but soon realized that I would likely have to continue on to get a bachelor degree in order to be competitive in the industry. The chair of environmental program at Okanagan College whom I have great respect for, suggested that I consider a career in Water Treatment and suggested shadowing a day in The Water Engineering Program at Okanagan College. After some research I realized that the water and wastewater treatment industry presented a great deal of opportunity and that it was a growing field all over the province. With Hydrology being my main interest in the environmental field, Water Treatment seemed like the natural choice. Turns out it is a great fit for me, I really enjoy it! (Thanks Rob!)

How long have you been an Operator?

Six years.

What are your core functions?

I work as a Water Treatment Operator at a Metro Vancouver Water Treatment Plant in Coquitlam BC. As Operators here, we rotate between the different areas of the treatment plant e.g. ozone, UVD & chlorination/corrosion control etc., ensuring the process is running as intended. In addition to the plant, we rotate between working at one of nine rechlorination booster stations, situated throughout the distribution system across the Lower Mainland.

What is your typical day?

There doesn't seem to be a 'typical' day where I work, every day is different and I like that. All Operators work in many different areas, and each area does require time for daily routine tasks such as lab work e.g. to verify water quality and to ensure that all analyzers are



reading correctly, plant checks, receiving chemical deliveries, and the general monitoring/tweaking of the processes. We often work alongside the other trades or contractors on site, supporting them as needed for the task at hand. Also, most of us have some sort of specialized ongoing side project they are working on. For the most part the days are not monotonous, which suits me!

What do you most enjoy about the work?

I like the diverse nature of the job. Alternating between working at the plant and out in the field keeps things interesting. Even after six years, there is always something new to learn. I feel that the morale within our department is positive and feel fortunate to work with such a great group of people. We work well together and have been known to all get out socially for some fun once in a while.

What are some challenges you face?

Water quality during storm events can and have an impact on plant operations. During the last atmospheric river event we had a mud slide in the watershed causing turbidity spikes to around 20 NTU, the highest Coquitlam water treatment plant has seen. During that same storm a portion of the (only) access road to the watershed partially washed away leaving us unable to receive chemical deliveries and temporarily putting anyone who drove to the plant at some risk.

Can you speak of a highlight in the past year?

I was just successful in writing my WT level IV! I consider that a pretty great highlight and a personal career milestone. It's also a great relief, no more exams... hopefully!

What advice do you have on how to have a successful Career as an Operator?

Maintaining a positive outlook is key. It's easy to get caught up in the politics of it all. I feel it's important to understand that everyone works differently, to keep an open mind and be willing to listen and compromise. There is always something new to learn no matter how long you've been at it.

What do you do when you're not working?

I love to ski in the winter and play on the water in the summer, anything outside really. We live in beautiful BC, so it's pretty easy to get up to all kinds of great adventures. As well, family and friends are very important to me. I'm quite social, I cherish all my personal relationships. I love having my niece over for sleepovers, arts and crafts, and fun kid adventures. Oh, and I will almost always say yes to dining out at many different kinds of restaurants, eating all the yummy things. My boyfriend and I

seem to be on a bison/beef carpaccio and brisket kick at the moment.

What else can you tell us about working as an Environmental Operator?

Being a Water Treatment Operator is a very rewarding, unique career. We work in a protected pristine watershed, it's beautiful and often a nature show with eagles, blue herons, bears, spawning salmon, and the odd fox or bob cat. I appreciate the work of Metro Vancouver's Watershed security group, they protect this precious resource and keep our watershed's safe. Thank you!

Whom would you recognize as a mentor?

Not one person in particular, but many great instructors throughout school and everyone I have worked with along the way have shared/imparted their knowledge, each offering valuable contributions to get me to where I am today.

Anything else you would like to add?

Water Treatment is a great career, I feel high schools could promote it more as I don't know how many young people would even think of it. Many folks take for granted the clean, safe water that comes out of their faucets every day.

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MESSAGE FROM TEAM EOCP



As spring ushers in a season of renewal, growth, and fresh starts, EOCP too is entering a time of meaningful change and transformation. This period of transition includes staffing changes and strategic planning initiatives, all focused on strengthening our organization and enhancing the service we provide to our members.

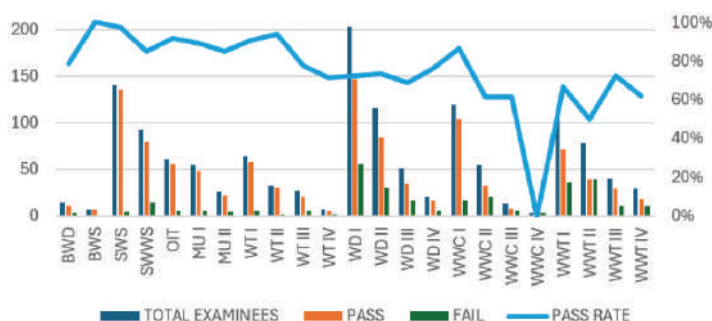
We are pleased to announce that Gulmira Turginbayeva has joined the EOCP team as our new Administrative Assistant, effective April 14th. We are delighted to have Gulmira with us and look forward to her contributions to our organization.

In addition, EOCP is currently engaged in the process of recruiting a new Chief Executive Officer. Recognizing the significance of this leadership role, the Board is committed to conducting a thoughtful and thorough search to ensure the right fit — both for the individual selected and for the continued success of EOCP.

Beginning July 1st, EOCP will be implementing the latest version of the WPI standardized level I – IV exams. Training providers have been notified and provided with the updated Need-to-Know criteria. These revised exams are designed to set a new benchmark for professional standards and promote excellence within the water industry. Further details can be found on [page 5](#) of this Digest.

In 2024, a total of 1,362 exams were administered across 407 exam sessions. Compared to the 2023 exam results, the number of Operators who wrote and successfully passed their exams was consistent with or higher than the previous year, apart from the WWC IV category, which had a limited number of examinees.

2024 EOCP Exam Pass Rates



We greatly appreciate the feedback from our recent membership survey, which has identified important opportunities to enhance our responsiveness, service quality, member satisfaction, and advocacy for professional needs. Your voices are shaping the path forward, and we are energized by the opportunity to evolve and better serve you. Together, we are building an even stronger EOCP.

Question:	Very Satisfied or Satisfied	Neutral	Dissatisfied or Very Dissatisfied
How satisfied are you with how the EOCP represents your professional interests?	57%	25%	18%
How satisfied are you with the responsiveness of the EOCP?	61%	23%	16%
How satisfied are you with the quality of the services of the EOCP?	62%	21%	17%
Overall, how satisfied are you with the EOCP?	62%	20%	18%

In May, EOCP Directors, staff, and stakeholders will gather in Kelowna for a strategic session to set our course for the next five years. As part of this process, we will review the results of the recent membership survey. We recognize there are areas where we must improve to enhance membership satisfaction, and your feedback is helping to shape our priorities. For insights into the salary-related findings from the survey, please see [page 10](#) of this Digest.

The CEU reporting period wraps up on December 31, 2025. As we reach the halfway mark, it's a great time to check in and make sure you're on track with your requirements. Take a moment to review your profile to confirm your 2025 dues are paid and that you're making good progress toward your CEU goals. We're here to support you every step of the way!

Lastly, registration for EOCP2025 is open. We have a new venue for this year's in-person event at the Sheraton Vancouver Airport Hotel in Richmond. Make sure to [Register Here](#) by June 15th to get the early bird rate!

NEW STANDARDIZED EXAMS COMING IN JULY 2025

EOCP currently uses the latest version of the standardized Level I-IV WPI exams and will continue this practice with the introduction of the new exams in July 2025. Training providers have been informed and given access to the updated Need-to-Know criteria. These exams aim to establish a new benchmark in professional standards and promote excellence within the water industry.

Exam Development

Development of the new level I – IV exams began with new job analyses conducted in 2022 - 2023; a process through which tens of thousands of industry stakeholders provided input on the significance of over 700 industry job tasks. These tasks were analyzed utilizing several different criteria including respondent demographic information, population served, plant size, plant technology, the criticality of job tasks when aligned with both facility and system operation, and most importantly, public health.

This data was analyzed by both SMEs and psychometricians to identify a framework for WPI's standardized examinations known as an exam content outline (ECOs) which are essentially examination blueprints; a framework that identifies every topic and task that may be testable on an examination.

Need-to-Know Criteria

SME committees of varying backgrounds and geographical representation, including certified EOCP Operators, utilized the ECOs to identify significant job tasks for inclusion on public facing documents called Need-to-Know Criteria. Additional SMEs are guiding updates to the format of the Need-to-Know Criteria to improve clarity for the candidates, certifiers, and trainers who reference the documents. Overall, when compared to prior editions of the Need-to-Know Criteria, you can expect the new outlines to have:

1. **More clearly stated and streamlined job task statements:** Bulleted task listings and descriptions will provide clear and concise descriptions of content that is testable on each standardized exam.

2. **Reference alignment by content area:** To assist operators with exam preparation tasks, the primary and secondary industry reference materials used in each content area will be identified on the new NTKs. This, in conjunction with the operator's individual mastery report, will assist the operator, and their trainers, in identifying the most appropriate reference materials to utilize for exam preparation.
3. **Removal of "analysis-type" items:** The testing industry best practices have evolved to exclude these types of items in certification examinations that identify minimum competence. It was determined that the complexity of an analysis item becomes difficult for certain demographic populations and therefore affects the examination's fairness.
4. **New Exam-Difficulty Equating:** With the benefit of almost ten years of statistical data under this exam development model, our psychometricians have identified demographic trends in the industries' practitioners and are employing exam equating methodology that will more accurately reflect their competence levels.

You can find the [NEW Need-to-Know Criteria here](#).

Sample Questions and Scoring

WPI standardized exams are comprised of 100 scored questions as well as 10 pre-test questions. The 10 pre-test questions are not used to calculate the score, and they allow WPI to gather valuable data before they are included as scored questions on future versions of the exams. They are unidentified to ensure candidates answer them with the same care as the scored questions.

With the release of the new examinations, candidate scores will be reported as a scaled score. WPI employs a Modified-Angoff methodology to set these pass/fail points, which relies on SMEs to examine the content of each item and

then estimate the proportion of minimally qualified candidates that would answer the item correctly. A scaled score is a conversion of a candidate's raw score on an exam to a common scale with a passing grade of **70%**.

The points below detail the competence standard:

- A score of 100 scaled score units represents a perfect score with all questions answered correctly.
- A score of 1 scaled score unit represents the lowest score possible and signifies only a small number of questions were answered correctly.
- Candidates must receive a score of 70% scaled score units or higher to pass the exam which represents the minimum standard of knowledge.

Sample Recall Question

Tasks at this level typically require the simple recall or recognition of specific facts, concepts, processes, or procedures, with little to no problem-solving involved. Candidates may be asked to identify, illustrate, recall, and/or recognize specific information. Example:

Although the required contact time for chlorine to kill bacteria may vary depending on certain water characteristics, the typical industry standard is:

- A. 15 minutes.
- B. 30 minutes.**
- C. 45 minutes.
- D. 60 minutes.

Sample Application Question

Tasks at this level will involve some basic problem solving, calculations, or the interpretation and application of data. Candidates may be asked to calculate, categorize, classify, compare, differentiate, explain, specify, translate, and/or apply knowledge. Example:

*In the activated sludge process, some of the activated sludge **MUST** be wasted to:*

- A. increase digester gas production
- B. prevent excessive solids build-up.**
- C. prevent clogging of the sludge return line.
- D. prevent overloading of sludge return pumps.

Sample Analysis Question

Tasks at this level may involve higher level problem solving, evaluation, or the fitting together of a variety of elements into a meaningful whole; they will usually require many steps in the thought process. You may be asked to analyze, evaluate, formulate, generalize, judge, predict, and/or use inductive or deductive reasoning to arrive at a solution. Example:

A single-phase 50 KVA transformer, having a primary voltage of 480 volts and a secondary voltage of 115\230 volts, is supplied on the primary side through a circuit protected at the distribution panel by a 250 amperes circuit breaker. Which of the following is the minimum additional overcurrent protection needed by the transformer?

- A. a 125 amperes circuit breaker at the secondary of the transformer
- B. a 225 amperes circuit breaker at the secondary of the transformer**
- C. a 225 amperes circuit breaker located in the distribution panel
- D. a 250 amperes circuit breaker at the secondary and a 125 amperes circuit breaker at the primary of the transformer

The introduction of the new standardized Level I-IV WPI exams in July 2025 marks a significant advancement in the water industry's professional standards. By incorporating comprehensive job analyses, updated Need-to-Know criteria, and refined scoring methodologies, these exams will better reflect the competence of industry practitioners and ensure fairness across diverse demographic populations. As the water industry continues to evolve, these exams will play a crucial role in promoting excellence and safeguarding public health.





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MATH FOR OPERATORS: THE SOLUTION TO POLLUTION IS DILUTION

By Graeme Faris

It was once thought, and commonly accepted, that dilution was the solution to pollution. Indeed, learned professionals at the turn of the 19th century professed it to be so.

In 1873, Dr. C.F. Chandler, President of the New York Board of Health stated: *"although rivers are the great natural sewers, and receive the drainage of towns and cities, the natural process of purification, in most cases, destroys the offensive bodies derived from sewage and renders them harmless"*. In 1900 in Dawson City, Yukon, the Medical Health Officer mused: *"...we asked ourselves, as all sanitarians should do, what are the causes of disease? The answer, so far as our duties were concerned, was ... impure water."*

Shortly thereafter, the use of chlorine and its compounds came into widespread use worldwide and operators have been dealing with dilution of these useful disinfectants ever since.

In this installment of Math for Operators we will look at an equation used to dilute a chemical compound with water to achieve a desired concentration and an equation which calculates the required quantities required to blend two solutions of differing concentration to achieve a third solution of a desired concentration and volume.

Condition 1 – Dilution of a strong solution with water

The equation is:

$$V = X \times H \times \frac{(A - B)}{B}$$

Where:

A = % strength of initial (strong) solution

B = % strength of desired final (weaker) solution

X = litres of initial (strong) solution

H = specific gravity of initial (strong) solution

V = litres of water needed to accomplish dilution

How many litres of water are needed to dilute 20 litres of a 12% NaOCl (specific gravity 1.21) solution to a 2.5% solution?

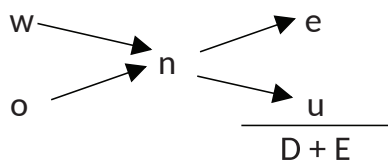
Insert known values and solve

$$V = 20 \times 1.21 \times \frac{(12 - 2.5)}{2.5} = 91.96 \text{ litres}$$

Condition 2 – Blending of two different solutions to achieve a third solution of a desired volume and concentration.

The dilution box is a useful tool for solving dilution problems. It is especially useful when an exact amount of the new product is desired.

The dilution box is set up as follows:



$$D = B - C = \text{parts of A required}$$

$$E = A - C = \text{parts of B required}$$

$$D + E = \text{Total Parts required}$$

In the dilution box method, the two numbers on the left (A, B) represent the known concentrations. The number in the center (C) represent the desired concentration. The numbers on the right (D,E) are determined by subtracting diagonally the existing concentrations from the desired concentration.

Ignore any negative values as a result of the subtractions.

How many liters of a 15% solution must be mixed with a 2.1% solution to make exactly 2,500 liters of an 8% solution?

Step 1 – Set up the dilution box

15%	8%	5.9	5.9 parts of the 15% solution are required for every 12.9 parts
2.1%		7.0	7.0 parts of the 2.1% solution are required for every 12.9 parts
		12.9	total parts

Step 2 – Solve for volumes needed

$$\frac{5.9 \text{ parts (2,500L)}}{12.9 \text{ parts total}} = 1,143 \text{ L of the 15\% solution}$$

$$\frac{7.0 \text{ parts (2,500L)}}{12.9 \text{ parts total}} = 1,357 \text{ L of the 2.1\% solution}$$

To make 2,500 L of 8% solution, mix 1,143 L of 15% solution and 1,357 L of 2.1% solution

Now that you know how to dilute the chemicals you use to useful concentrations you can use the formulae in the WPI/EOCP handouts to calculate the dose that will be applied.



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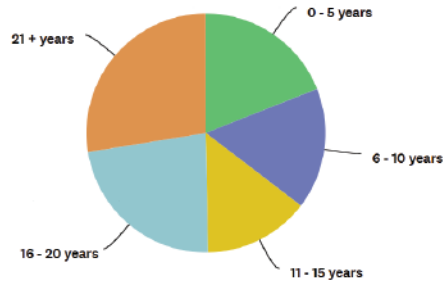
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WORKFORCE VALUE UNVEILED: WHAT TODAY'S OPERATORS EARN

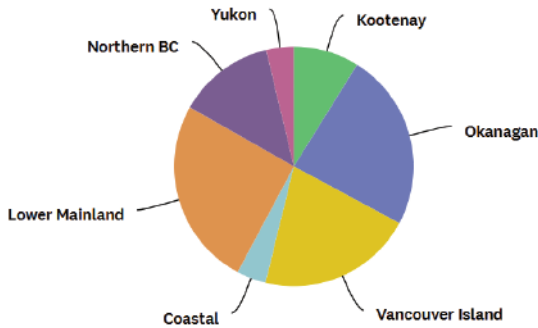
As part of our membership survey, we included questions on Operator salaries. The last salary survey was conducted in 2017, and since then, interest in updated data has grown among both Operators and employers. Here are the results, based on over 400 responses.

Respondents with over 21 years in the industry made up the largest group though only by a small margin.



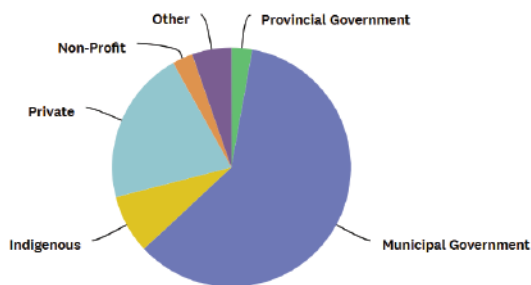
ANSWER CHOICES	RESPONSES
0 - 5 years	18.98%
6 - 10 years	16.44%
11 - 15 years	14.35%
16 - 20 years	22.69%
21 + years	27.55%
TOTAL	

Most respondents are based in the Lower Mainland, with the Okanagan region a close second.



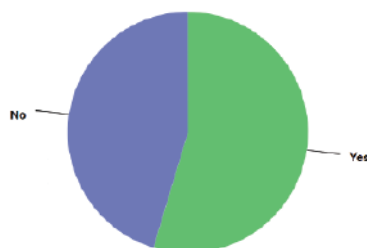
ANSWER CHOICES	RESPONSES
Kootenay	8.86%
Okanagan	24.01%
Vancouver Island	20.98%
Coastal	3.96%
Lower Mainland	25.41%
Northern BC	13.05%
Yukon	3.73%
TOTAL	

The largest number of respondents are public sector employees.



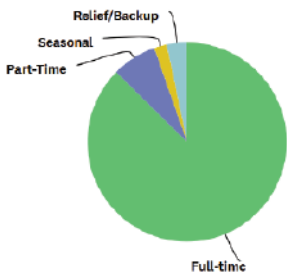
ANSWER CHOICES	RESPONSES
Provincial Government	2.78%
Municipal Government	60.32%
Indigenous	7.89%
Private	20.88%
Non-Profit	2.78%
Other	5.34%
TOTAL	

The majority are union employees.



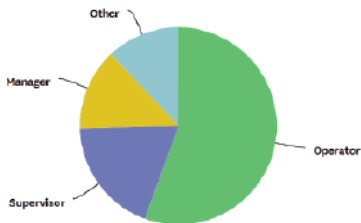
ANSWER CHOICES	RESPONSES
Yes	54.63%
No	45.37%
TOTAL	

Most are full-time employees.



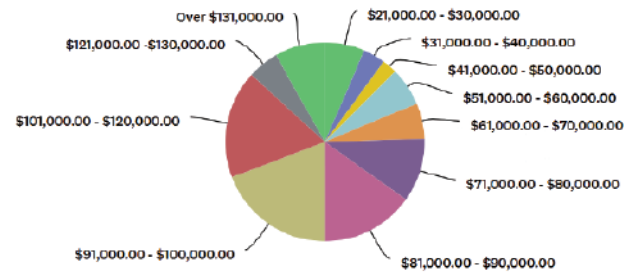
ANSWER CHOICES	RESPONSES
Full-time	87.41%
Part-Time	7.23%
Seasonal	2.10%
Relief/Backup	3.26%
TOTAL	

55.56% respondents are Operators.



ANSWER CHOICES	RESPONSES
Operator	55.56%
Supervisor	18.98%
Manager	13.43%
Other	12.04%
TOTAL	

The salary range of the largest group of respondents is \$91,000 - \$100,000



ANSWER CHOICES	RESPONSES
\$21,000.00 - \$30,000.00	6.49%
\$31,000.00 - \$40,000.00	3.61%
\$41,000.00 - \$50,000.00	2.40%
\$51,000.00 - \$60,000.00	6.25%
\$61,000.00 - \$70,000.00	5.77%
\$71,000.00 - \$80,000.00	10.34%
\$81,000.00 - \$90,000.00	15.14%
\$91,000.00 - \$100,000.00	19.23%
\$101,000.00 - \$120,000.00	17.55%
\$121,000.00 - \$130,000.00	5.05%
Over \$131,000.00	8.17%
TOTAL	

We are encouraged by the strong participation in this survey and hope the salary data offers valuable insights to support you in your role as Operators.



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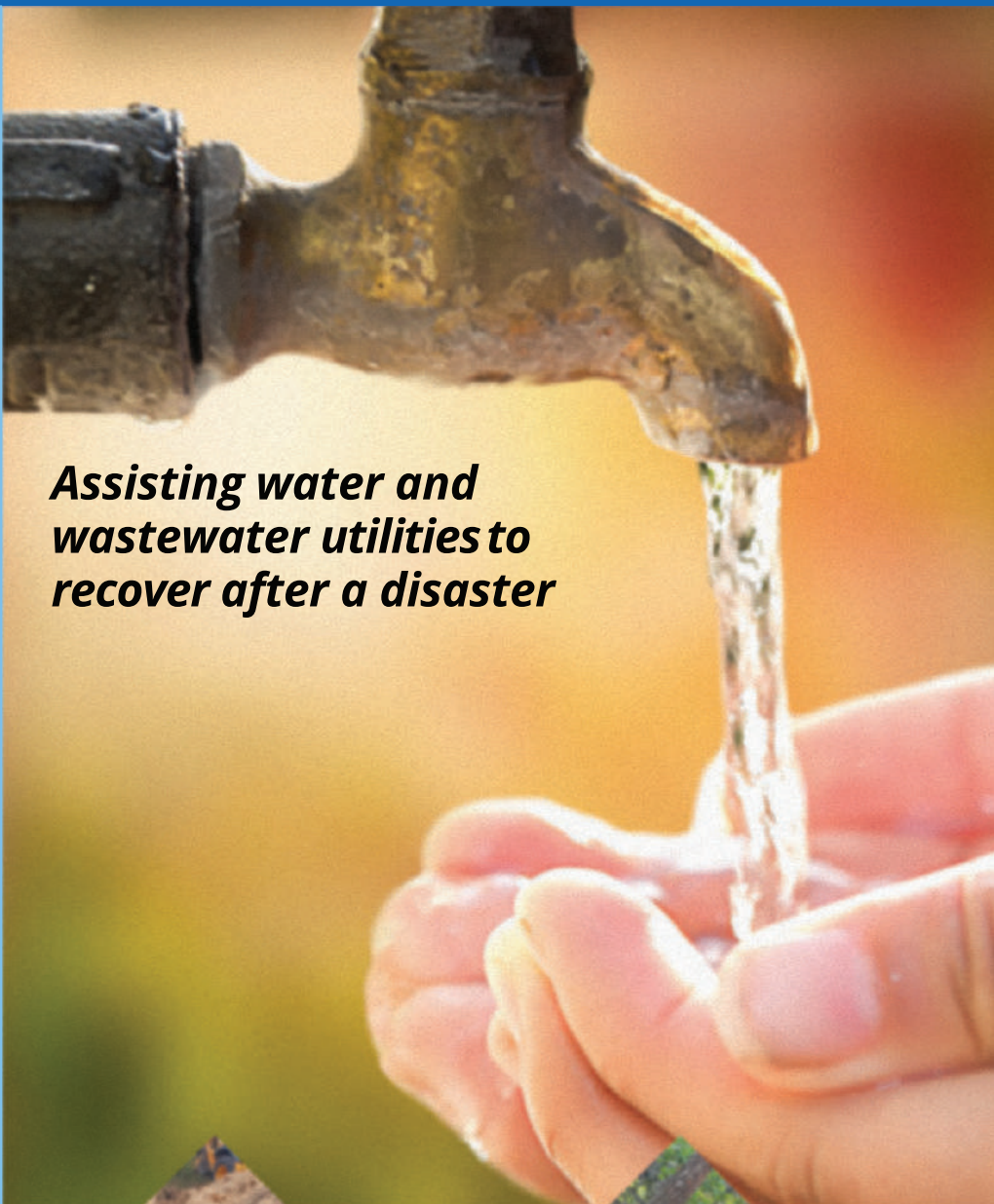
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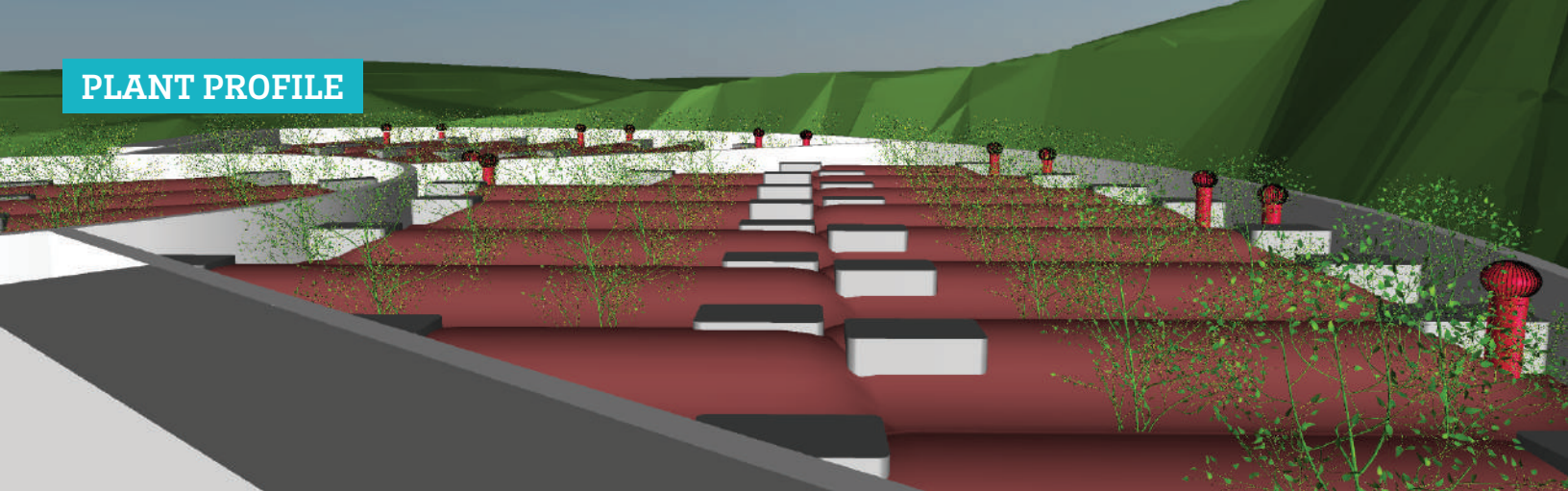
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PRINCE RUPERT'S INNOVATIVE WASTEWATER TREATMENT SYSTEM

NATURE-BASED SOLUTIONS APPROACH TO MANDATED TREATMENT

By Veronika Stewart

Prince Rupert, BC, nicknamed the 'gateway to Alaska' is on the list of coastal communities working, as Victoria did recently, to meet Federal treatment objectives for wastewater treatment. Once planned as a port community to rival Vancouver, the little northern town has seen industrial booms and busts over the past several decades that left it in a less than desirable financial position to tackle a potential \$200 million wastewater upgrade.

Communities with an ocean view are also not enthusiastic about standard concrete wastewater treatment facilities encumbering waterfront areas. In Prince Rupert, where waterfront access is already limited due to competition from historic and current industrial uses, there is likely nowhere that is truer. The community is also the rainiest in Canada, which poses unique challenges for treatment in a community where storm and sewer have not yet been wholly separated. For these reasons, as well as financial and capacity-based ones, the municipality there is exploring an option to meet mandated wastewater treatment objectives that uses natural processes in more tucked away natural settings to treat their effluent.

The first site selected for the treatment pilot has an interesting history. Prince Rupert was a major outpost for the US Military in WWII due to its coastal location and proximity from Asia to Alaska. When the military left, they left assets like bunkers and other outposts throughout the community – but also several bunker C fuel tanks in an area known as Moresby Pond. In the last decade, the municipality has removed the tanks but has had few options to use the land left behind given historic uses. The site of a former tank left behind a perfect carved out area to place the pilot

biofilter based wetland treatment system.

The final result for this first project will essentially look like a large planter and will service approximately 100 homes from the surrounding area. There is an existing sewer line running through the area from which a small portion of wastewater will be redirected into the constructed wetlands, before being tested and discharged back into the existing sewer line.

Within the constructed wetlands, solids are removed from the influent within a confined system

*Wastewater treatment site*

housed in an outbuilding, before the liquid waste is piped beneath layers of soil and plant-life. Here, the soils and plant roots create the perfect environment for microbes to live, the microbes digest the unwanted contents of the wastewater, and the plants receive a constant supply of water at their roots. Each element of the nature-based system acts as a part of a cyclical environment that treats wastewater naturally.

MAGNA Engineering Services Inc., a Calgary-based civil engineering firm, is consulting on the installation of their MAGNA Biofilter Wetland System in this first site for Prince Rupert.

"What I love about working with Prince Rupert is that they don't just do environment for environment's sake," said Jennifer Massig, MAGNA's CEO. "They understand the value of sustainable solutions.

They understand the things that support the community, the environment, and long-term fiscal responsibility."

Prince Rupert recently won an Innovation Award from the EOCP for the design of the project, and staff are excited about what the future holds for this form of treatment.

"The City is excited to train its operators on the innovative biofilter-based wetland treatment system, preparing them for the future of wastewater treatment. With this new facility, the municipality is taking a proactive approach to building the skills and expertise needed for the successful operation of similar systems as more nature-based wastewater plants come online," said Jordan Schmidt, Deputy Operations Director with the City of Prince

Rupert. "This hands-on training will ensure that Prince Rupert's operators are fully equipped to manage and maintain the next generation of naturalized treatment technologies that will play a key role in the city's plans for sustainable growth and environmental stewardship."

The project began in 2020, when Prince Rupert conducted a feasibility study that outlined the benefits of using this type of wastewater treatment technology. The estimated cost of constructing the project is \$6 million, funded primarily by grants from FCM's Green Municipal Fund both for feasibility and implementation of the project. Following confirmation that the treatment method is successful in Prince Rupert's climate, the City plans to deploy it in other areas of the community.

Asset Integrity for

WASTEWATER TREATMENT

- *Belzona has designed a wide range of solutions that combat operational challenges: erosion-corrosion, chemical attack and abrasion problems that result in increased operational costs.*
- *Belzona's cold-applied systems have proven to help wastewater treatment plants improve their operation by eliminating replacement costs and decreasing the risk of unscheduled shutdowns.*

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IMPROVE IT



PROTECT IT



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REBUILD IT



CONNECT IT



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ARE YOUR CEUS UP TO DATE?

A Mid-Period Reminder

There are still eight months left in the 2024–2025 reporting period. This is plenty of time to stay on top of your Continuing Education Units (CEUs)! Make sure you're on track to keep your certification up to date.

Requirements:

- **Level I–IV:** 24 hours every two years; 25% in each field if holding multiple certificates.
- **SWS/SWWS:** 12 hours every two years; 25% in each field if holding both.
- **BWD:** 6 hours every two years; 3 hours in BWD if holding multiple certificates.
- **BWS:** 12 hours every two years.

Rules:

- Core CEUs are job-specific; related CEUs are industry-wide.
- No credit for the same course within the same period.
- CEUs can't be split among periods; no CEUs for exams or self-study.
- Surplus CEUs don't carry forward; 25% must apply to each certificate held.
- Failure to meet requirements or pay dues results in 'not certified' status.

Exemptions:

- Operator-in-Training certificates.
- New certifications within a reporting period (except reciprocity).

Staying current with CEU requirements is essential for maintaining certification and ensuring the safety and reliability of water and wastewater facilities. If you have specific questions about your requirements, please reach out to our office – we are always happy to assist!



ENVIRONMENTAL OPERATOR TRAINING



SMALL WATER SYSTEMS CORRESPONDENCE COURSE NOW AVAILABLE!

- All courses are taught by certified operators who are currently working in the field.
- Save money by scheduling a course at your location.

Contact us to schedule a course:

jamesonwater.com 250.882.0796 jamesonwater@gmail.com

INTRODUCING... GULMIRA

Q & A with Gulmira Turginbayeva, EOCP's New Administrative Assistant

What attracted you to the EOCP?

I was attracted to the EOCP's vision and mission the moment I started to research about the company. Not every organization has a clear understanding and vision of its goals and not many businesspeople think about the benefits to the society. However, it was obvious for me that the EOCP was built with the great purpose and company kept growing and thriving because of the clear mission it has. When I met the EOCP team during the interview, I was attracted even more as I felt that this company has great and positive atmosphere, and all employees are super welcoming. I feel lucky and very excited about this opportunity and hope to bring big value to this team!

What experience do you bring to the role?

I have over 15 years of administrative experience in different industries. I worked as the HR Specialist in Shell Oil and as Office Administrator in Samsung SDS. I have two master's degree in public and business administration. I got my MBA degree in Canada at the University Canada West in 2020.



Gulmira Turginbayeva exploring BC

What did you do before joining the EOCP?

My recent Canadian experience includes work at the immigration company Anyvisa Services Inc. and jewelry company ERL Diamonds. Also, I was a part-time employee at the Access Control Office in the Securiguard, the company that provides security and scanning services to the YVR airport.

What are your hobbies / interests outside of work?

I love spirituality and the esoteric. I read and listen works of authors in the field like Joe Dispenza, Carlos Castaneda and Eckhart Tolle. Also, I love fishing and camping, and Beautiful British Columbia is the best place on Earth to do it!

GUIDELINES FOR CANADIAN DRINKING WATER QUALITY SUMMARIES FOR IRON AND PFAS

Summary for Iron in Drinking Water

Objective:

Health Canada has established an **Aesthetic Objective (AO)** for total iron in drinking water at ≤ 0.1 mg/L. This standard is set to address taste, staining, and discoloration—not direct health risks.

Exposure and Health Impact:

- Iron is an essential nutrient; most intake comes from food.
- Drinking water contributes **<10%** of total daily iron intake in Canada.
- Excessive iron intake (>30 mg/day) may cause gastrointestinal discomfort, but iron is not considered toxic or carcinogenic.
- The **Tolerable Upper Intake Level (UL)** for adults is **45 mg/day**.

Treatment and Monitoring:

- Iron in water comes from natural sources, pipe corrosion, and treatment infrastructure.
- Effective removal methods include **oxidation, filtration, biological treatment, and reverse osmosis**.
- Municipal and residential systems can achieve levels <0.05 mg/L, but require regular maintenance and monitoring.

System Management and Co-Contaminants:

- Iron may interact with **lead, arsenic, and manganese**, increasing the importance of integrated water system management.
- Routine testing, especially during source changes or distribution events, is critical.

International Comparison:

- Canada: **0.1 mg/L (AO)**
- U.S. EPA: **0.3 mg/L (secondary standard)**
- EU: **0.2 mg/L**
- WHO: **No health-based guideline**

For full technical details, visit:

[Health Canada – Iron in Drinking Water](#)



Summary for PFAS in Drinking Water

Health Canada, in collaboration with provincial and territorial governments, established a drinking water objective and updated its drinking water guidelines for per- and polyfluoroalkyl substances (PFAS), introducing a new interim objective to address these substances collectively.

Key Changes:

- **Unified Limit:** A single objective of 30 nanograms per litre (ng/L) has been established for the combined concentration of 25 specific PFAS in drinking water. This replaces the previous individual guidelines for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), and screening values for nine other PFAS.
- **Precautionary Approach:** Given the limited toxicological data for many PFAS and their potential cumulative health effects, Health Canada recommends maintaining PFAS levels in drinking water "as low as reasonably achievable" (ALARA).
- **Analytical Methods:** The objective is based on concentrations achievable using current analytical methods and treatment technologies, such as granular activated carbon, anion exchange, and reverse osmosis.
- **Interim Measure:** This objective serves as interim guidance while Health Canada continues to develop comprehensive, health-based guidelines for PFAS in drinking water, a process expected to take several years.

Implications:

This updated guideline reflects a shift towards a more holistic management of PFAS in drinking water, acknowledging the challenges in assessing individual PFAS and the need for a more streamlined approach to ensure public health protection.

For more detailed information, you can refer to Health Canada's official document on the [Objective for Canadian drinking water quality per- and polyfluoroalkyl substances.](#)



Public Works Association of BC In-Person Training Opportunity

Proudly Sponsored and supported by:



Course: APWA Winter Maintenance Supervisor and Operator Certificate Program

Dates: Nanaimo Oct 21st Langley Oct 23rd, 2025

Supervisor Course: Who Should Attend?

- Supervisors with winter maintenance responsibilities
- Operators who aspire to be supervisors
- Operators who want a greater understanding of winter maintenance processes

Cost: \$450 for PWABC members, \$600 for non-members

Operator Course: Who Should Attend?

- New and experienced operators
- Supplemental operators from other departments
- Contract operators
- Operators who want a greater understanding of winter maintenance operations

Cost: \$300 for PWABC members, \$450 for non-members



Group Insurance Benefits Through EOCP

Did you know that through the EOCP there are tailored options for employee group insurance and benefits whether as an individual operator or for your employee group?

In partnership with HUB International, specific programs are available to provide valuable coverage for employees, operators, and family members.

Coverage can include but is not limited to:

- Life insurance
- Critical Illness insurance
- Extended healthcare (e.g., prescription medication, physiotherapist, chiropractor, prescription eyewear, travel, etc.)
- Dental care
- And more

For more information on our employee health benefit options through the EOCP, please reach out to Maury Lum (maury.lum@hubinternational.com, (236) 838-6817).



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Bioaugmentation for the Professional Operator. Eliminate Grease and Sludge at the source.

Waste Go is a proven on site formulation of bacteria and enzymes. This powdered blend, when activated with water, digests solid waste, sludge, fats, oils and grease. Not an emulsifier! Waste Go solves the problem where there is a problem.

Waste Go is nature's own way of recycling all organic waste back to plant food and it's NSF Certified as safe for use in all food prep and production areas. An industry first!

Treat. Perform. Save.

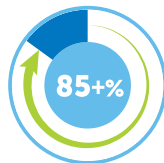
Waste Go can keep your lifts and lines clean of all organic debris including fats, oils, and grease. It's also excellent for rejuvenating lagoons, increasing their capacity, and adding decades to their life spans.

Waste Go has been proven to achieve average reductions of:

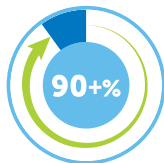
FOG Reduction



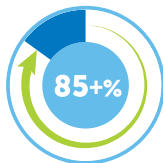
BOD Reduction



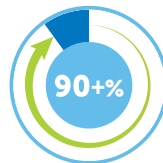
Phosphorus
Reduction



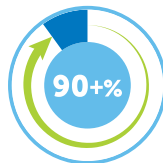
TSS Reduction



H₂S Reduction



Ammonia
Reduction



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STATISTICS

January 1st – March 31st, 2025



EOCP

Environmental Operators
Certification Program

EXAM STATISTICS



375 exams
taken

113 exam
sessions

FACILITIES



79 facilities
added or
upgraded

CONTINUING EDUCATION UNITS (CEUs)

1,150 Operators
submitted CEUs

2,217 CEUs earned

DEFINITIONS

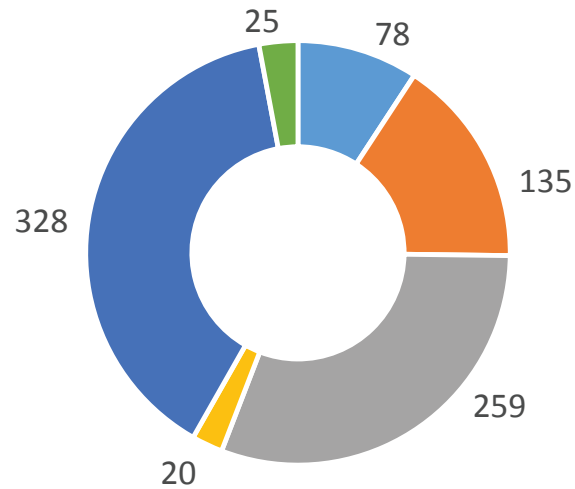
WT	Water Treatment
WD	Water Distribution
WWC	Wastewater Collection
WWT	Wastewater Treatment
OIT	Operator In Training
BWD	Bulk Water Delivery
BWS	Building Water System
SWS	Small Water System
SWWS	Small Wastewater System
SCS	Stormwater Collection System
MU	Multi Utility

OPERATOR CERTIFICATIONS

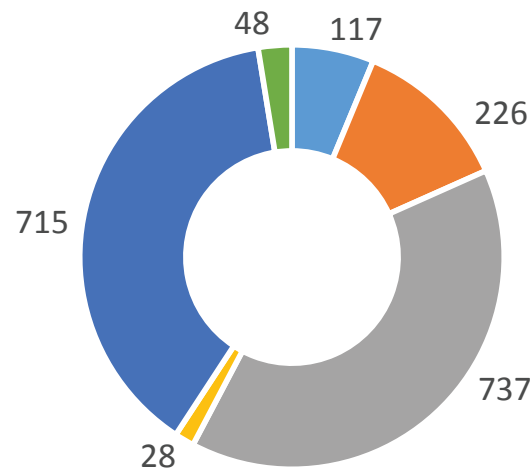
- MU II
- MU I
- IV
- III
- II
- I

OPERATOR CERTIFICATIONS

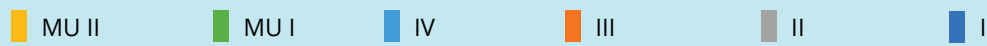
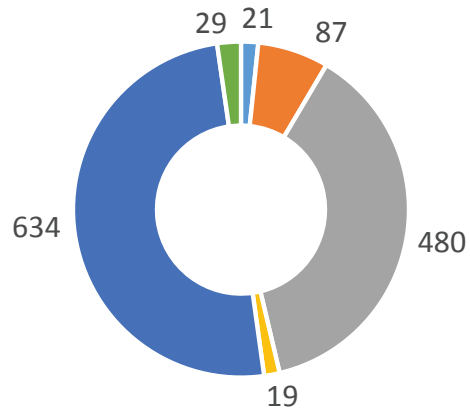
WT OPERATOR CERTIFICATIONS



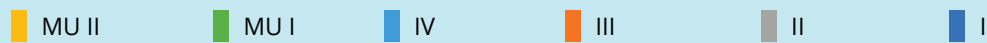
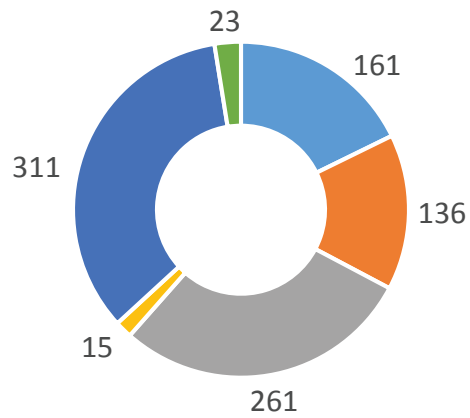
WD OPERATOR CERTIFICATIONS



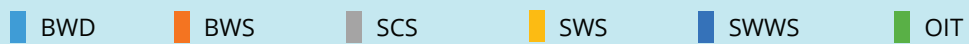
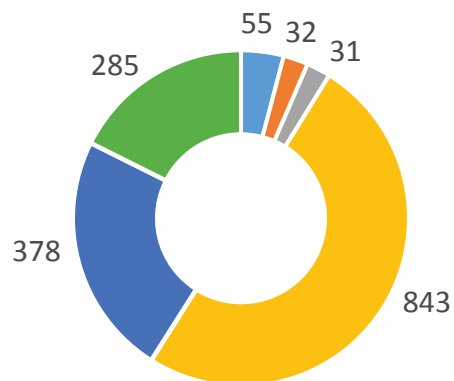
WWC OPERATOR CERTIFICATIONS



WWT OPERATOR CERTIFICATIONS

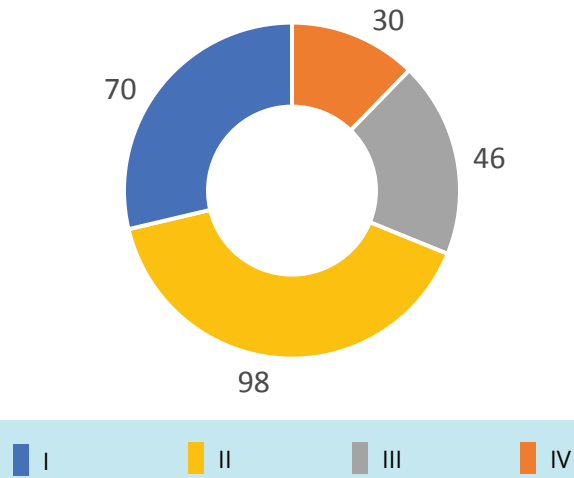


OTHER OPERATOR CERTIFICATIONS

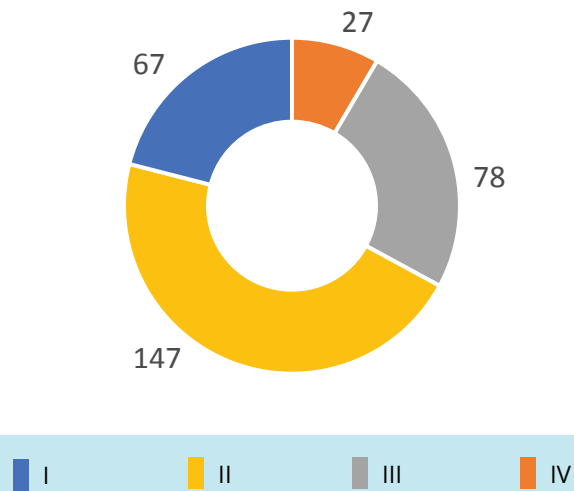


FACILITY CLASSIFICATION

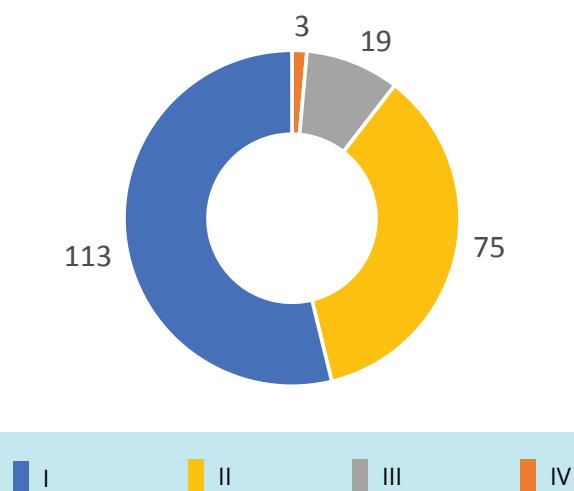
WT FACILITY CLASSIFICATIONS



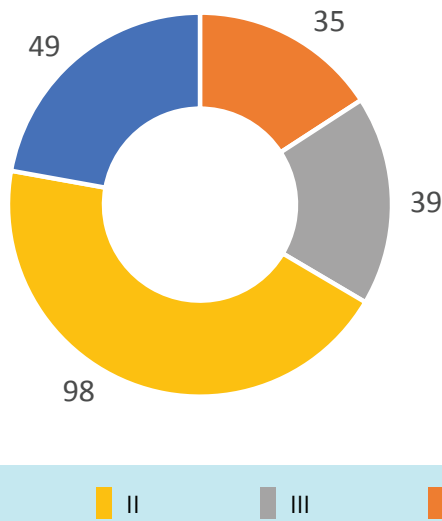
WD FACILITY CLASSIFICATIONS



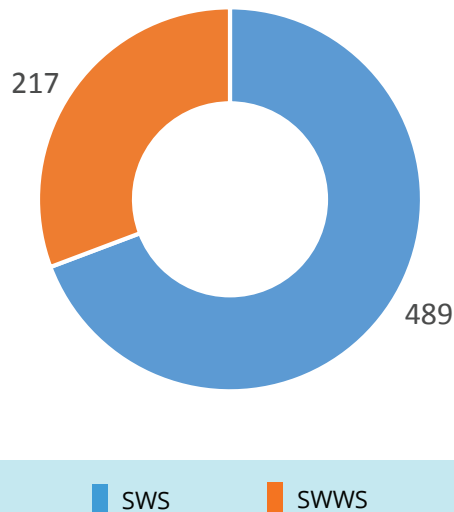
WWC FACILITY CLASSIFICATIONS




WWT FACILITY CLASSIFICATIONS




SMALL SYSTEMS CLASSIFICATIONS



Check your Operator status by logging into your profile at <https://crm.eocp.ca>. Choose **ACCOUNT** to see if your 2025 dues have been paid and **LEARNING STATUS / CEU** to see if your CEUs are up to date.

If your profile shows as  **Not Certified** this means you haven't paid your 2025 dues and/or submitted CEUs.

CEUs can be added to your profile by choosing **Action > Add Course Taken** under the learning column. Alternatively, you can forward your course completion certificates to eocp@eocp.ca.

If your profile shows as  **Certified** your 2025 dues are paid, and you've met the CEU requirements for the 2022-2023 reporting period.

There are eight months left in the current CEU reporting period! It ends **December 31, 2025**. If you haven't already met your CEU requirements for the 2024 – 2025 reporting period, please look for training opportunities from your preferred training providers, or look for options in the EOCP CRM at <https://crm.eocp.ca/ManageCourses>

REGISTRATION NOW OPEN!

22ND TO 24TH
SEPTEMBER 2025

IN-PERSON TRADESHOW AND EDUCATION SESSIONS

Strengthening Operators:
Innovating for a Sustainable Future



EOCP2025

2025 TRADESHOW AND EDUCATION SESSIONS
STRENGTHENING OPERATORS:
INNOVATING FOR A SUSTAINABLE FUTURE
#EOCP2025



Join us for the 2025 EOCP Tradeshow and Education Sessions, featuring top-notch training by industry leaders and offering up to 1.2 CEUs. We're pleased to introduce our new venue and an expanded trade show.

Registration opened on April 15, 2025. This event will be held in-person.

Comments from 2024 Attendees:

"I would like to commend the EOCP office staff for a great job with the conference. It was very informative and well planned."

"Always fun to attend in person"

"That was awesome!"

"Great conference as usual! Great food, great people and I am proud to be a part of this organization"



EOCP

Strengthening Operators:
Innovating for a Sustainable Future



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