

OPERATOR DIGEST

QUARTERLY NEWSLETTER
of the Environmental Operators
Certification Program BC/Yukon



FALL 2016 | NUMBER 130

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MEET THE STAFF



Kalpna Solanki
BSc, MBA, CPHI(C)
Chief Executive Officer (CEO)
ksolanki@eocp.ca

Kalpna Solanki is the new Chief Executive Officer at the Environmental Operators Certification Program. Kalpna holds an MBA from Simon Fraser University, a BSc from Simon Fraser University, and a Diploma in Technology (Environmental Health) from the British Columbia Institute of Technology.

Kalpna comes from an entrepreneurial background, and brings significant executive expertise with a focus on finance and customer relationship management. She has led strategy development and change management initiatives in organizations that have undergone significant change and rapid growth.

She has also been very involved in the non-profit sector – previously she was the Chair of the Canadian Red Cross Lower Mainland Region, President of the Simon Fraser Alumni Association, and Director with Big Brothers of the Lower Mainland. Currently, she sits on the board of the Investment Agriculture Foundation.

Kalpna is an avid reader, and spends her spare time being active with her family and dogs, and volunteering in the community.



Kim Eames
Office Manager
keames@eocp.ca

Kim Eames is the Office Manager for the EOC. She joined the EOC team in 2003 as Office Assistant, and was promoted to Office Manager in 2009. Her primary focus for EOC members is reviewing level I to IV applications for certification, as well as applications for reciprocity.

Kim is a graduate from the NAIT Business Administration Program, with a diploma in Finance.

She is married, and has an 8-year-old son.



Stephanie Hall
Exam Co-ordinator
shall@eocp.ca

Stephanie Hall started with EOC in August 2008 on a temporary basis as a maternity leave replacement, and accepted a full time position in August 2009.

Her main task is co-ordinating web-based exams throughout BC and Yukon, and issuing official letters and certificates for operator exam results. Stephanie finds that web-based exams enable operators to write their exams closer to home, and reduce travel. Results then also appear on screen within minutes, instead of weeks!



Heather Wallace
Program Assistant
hwallace@eocp.ca

Heather Wallace started part-time with the EOC in June 2007, and full-time as of September 2010. Her main responsibilities pertain to CEU Entries, Facility Classifications, and Operator Renewals. When you call the Office, you will probably hear her cheerful voice greet you, and direct your call.

Beyond EOC, Heather is a Caller/Cuer for two Square Dance clubs in the Vancouver Region. She also does special square dance events, including community and family events, in the Lower Mainland and in the Southern Interior of BC. She is also getting married in March 2017! Congratulations Heather!



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ENVIRONMENTAL OPERATORS CERTIFICATION PROGRAM

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 EOC office at eocp@eocp.ca

Changes of address, annual dues, Continuing Education

Requirements, exam applications, as well as general inquiries about the program should be addressed to: Environmental Operators Certification Program
201 – 3833 Henning Drive,
Burnaby, BC V5C 6N5

PHONE: 604 874 4784

FAX: 604 874 4794

TOLL FREE: 1 866 552 3627

EMAIL: eocp@eocp.ca

WEB: www.eocp.ca

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No. 41498030

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.



OPERATOR PROFILE

Thomas Hall
2016 Bursary Recipient

1 Why do you want to become a water/wastewater operator?

I decided to become a water/wastewater operator for a number of reasons. Primarily I was looking for a career that has a purpose in today's society and gives a sense of accomplishment throughout my career. I find water/wastewater operations work very interesting and I look forward to serving the public each day. I also feel that the water/wastewater field is just beginning to expand and will provide great career opportunities in the future.

2 What is your goal in entering this field?

My goal in entering water/wastewater operations is to find a career with a water supplier as either a distributions operator or a water treatment facility operator. I have been lucky enough to gain work experience in this area and have enjoyed every day of it. I will finish the Water Engineering Technology Program at Okanagan College over the next four months and then begin my career in water/wastewater operations.

WHO'S ON THE MOVE

Karren Kossey



A former WorkSafe BC compliance officer, Karren Kossey is now owner and operator of Mid Island Safety Consulting Inc (MISC).

MISC is a full service safety consulting company with more than 80 years of combined experience offering practical solutions for your safety needs.

The staff ranges from previous WorkSafeBC hygiene and safety officers, former municipal sector OHS supervisors to site proven construction safety officers. MISC's clientele spans a wide range of sectors including municipal, industrial and utility.

www.midislandsafety.com

SURVEY RESULTS

WE ASKED, YOU RESPONDED, WE ARE LISTENING...

By Kalpna Solanki, CEO

The EOCB recently completed a survey of its membership, and the response was tremendous, with more than 450 responses!

There was also a great deal of feedback on what other services you would like the EOCB to provide. Top choices were: Newsletters, Conferences, Special Events, and Benefit Plans. Work is already under way to investigate options related to conferences and special events, and we have now partnered with a benefits provider who is available to provide you with various insurance options.

You also responded that you would like to see the Operator Digest four times per year, and provided comment on what you would like to see in the Digest - we have started working on implementing more content based on your feedback. We are adding some new sections:

Who's on the Move - if you are moving within an organization, or to another location, let us know!

Innovation - if you have implemented new technology, please help us share the information with your fellow Operators.

Plant Profiles - this continues to be a popular feature, and we would love to feature your plant. Just contact us!

Thanks to all of you who participated in the survey - your feedback is valuable, and will help the EOCB better meet the needs of its membership.



Congratulations to Bobby Gresiuk, the winner of the draw - a package of EOCB promotional items including a Stormtech jacket, and a \$100 amazon.ca gift card are on their way to him!

| Question | Satisfied | Neutral | Dissatisfied |
|---|-----------|---------|--------------|
| How satisfied are you with how the EOCB represents your professional interests? | 68% | 25% | 7% |
| How satisfied are you with the responsiveness of the EOCB? | 71% | 23% | 6% |
| How satisfied are you with the quality of the services of the EOCB? | 71% | 21% | 8% |
| Overall, how satisfied are you with the EOCB? | 71% | 27% | 2% |



PLANT PROFILE

LAKE COUNTRY REVAMP

Wastewater treatment facility responds to unprecedented growth

History:



Stage 1 - 1999



Stage 2 - 2006

In 1998, just three years after the municipality's incorporation, the District of Lake Country began the construction of its first municipal wastewater treatment facility. The need for construction of a dedicated facility was due to an increase in community growth and a number of failing septic systems. This project was completed under a public-private-partnership agreement.

Stage 1

The Lake Country WWTP facility is a biological nutrient removal plant originally designed with no primary clarifier. The collection system was designed to equalize flow and the plant only received flow from 200 homes via two lift stations. There were two operators that worked out of a 200 square foot room that functioned as office, lab, lunchroom, washroom and change room. Effluent was discharged from the plant via a subsurface tile field that ran beneath the driveway to the facility.

Stage 2

In 2004, due to an increase in flow from the growing community, the design of a second phase of the treatment plant was undertaken. This phase included a secondary clarifier, conversion of the existing secondary clarifier to a primary clarifier, and the addition of a septage receiving site – to name a few of the upgrades.

By 2004, the number of lift stations throughout the community increased from 2 to 11 and the number of households went from 200 to 2,000. There were also three satellite plants added to the community during this five year period. The plant size almost doubled, but the operator working space had not increased. Shortly after completion of the plant upgrades it was deemed necessary to add a portable trailer to give staff a proper lunch and change room area. Staff at this time had increased to four operators.

Current:

By 2013 the District of Lake Country had seen unprecedented growth. Approval of additional development was dependent on increased capacity in wastewater treatment and Lake Country had to again increase the capacity of the WWTP. Phase 3 of the wastewater treatment facility was a 6.8 million dollar investment that would service Lake Country in the years to come.



Stage 3 - 2016

Admin Building:

The old facility had one room that functioned as a lab/office, and with the planned upgrades that room was repurposed to become an electrical room. A new detached building was designed to function as a shop, lunchroom, change room, lab and office.



New bioreactor



Stage II - 2006 Aerzen blowers

(2x50HP, 1x25HP not shown)



Polymer make-up and feed

Bioreactor upgrade:

It was determined that the bioreactor was a limiting factor in the treatment process and therefore it needed to be up-sized. An upgraded bioreactor would provide for redundancy and could serve as emergency storage if needed. A mirror copy of the existing bioreactor was built next to the old bioreactor.

Fine Air Diffusion:

Prior to the development of WWTP phase 3, aeration was achieved with mechanical pump style blowers. Not only were these blowers energy inefficient, they were high maintenance and had poor oxygen transfer. Three new high efficiency blowers were installed that reduced aeration power consumption by 75%.

Dewatering/Septage Receiving Site:

The Septage site at the WWTP receives as much as 26,000 USG per day from septic tanks in the Central Okanagan. At times, it has been difficult to store and process the volumes received.

In order to limit disruptions, a second centrifuge was installed along with higher capacity feed pumps, and a fully automated polymer make-up system. These upgrades offer back-up for maintenance, a 25% increase in processing ability, and a reliable and consistent polymer feed that will result in lower overall chemical usage.



Sydex feed pumps and macerator



Foul air/heat recovery unit



Bio-filters



New Pieralisi centrifuge

Foul Air Handling:

Since the existing AHU's were nearing their end of life, an all-new foul air system was put in place.

The main focus of this upgrade was to be energy efficient, so a heat exchange unit was installed to capture and recover some of the heat being lost through the high volume of foul air being discharged.

These upgrades also included an increase in the size to the bio-filters as well as a complete reconditioning of the filter media.

Suez Contact Information

Davin Larsen
Project Manager
250-766-1478
davin.larsen@suez-na.com

Owner Contact information

Greg Buchholz
Director of Operations
District of Lake Country
10150 Bottom Wood Lake Road
Lake Country, BC V4V 1E
250.766.5650
250.766.0115 fax

2014

| Parameter | Permit | Annual Average |
|------------------------|----------|----------------|
| Flow | 2.2 MLD | 1.28 MLD |
| Total Soluble Nitrogen | 6.0 mg/l | 3.75 mg/l |
| BOD | 10 mg/l | <5 mg/l |
| Ortho-phosphate | 1.5 mg/l | 0.05 mg/l |
| TSS | 20 mg/l | 5 mg/l |



INNOVATION

A LOOK INSIDE METRO VANCOUVER'S SEYMOUR-CAPILANO FILTRATION PLANT

Metro Vancouver's drinking water comes from reservoirs in three watersheds – Capilano, Seymour and Coquitlam. The Seymour-Capilano Filtration Plant (SCFP) treats water from both the Seymour and Capilano sources.

The Seymour-Capilano Filtration Plant provides two-thirds of the water for Greater Vancouver's 2.4 million residents, primarily to the westernmost of the region's 20 Water Districts.

The plant is located in the Lower Seymour Conservation Reserve, and is the largest water filtration plant in Canada. It began distributing water to the residents of Metro Vancouver in December 2009, and has the capacity to produce up to 1.8 billion litres per day.

An extensive ten year project to improve the water quality and supply in all seasons was completed in May 2015 as twin water tunnels connecting the

Seymour and Capilano watersheds became operational. The underground tunnels transport water over 7 kilometers from the Capilano Reservoir to this filtration plant, so that water from both Seymour and Capilano can be treated at one facility.

The primary objective of the filtration plant is the removal of particulates, organic matter and micro-organisms that are naturally present in the source water. This ensures a safe and high quality of drinking water that exceeds the Guidelines for Canadian Drinking Water Quality.

Water Services: People & Process

The centralized control room at SCFP is responsible for monitoring, operating, treating and distributing drinking

water to Metro Vancouver's member jurisdictions. The computerized control system allows operators to remotely monitor and operate Metro Vancouver's region-wide water distribution and wastewater collection systems 24 hours a day, seven days a week.

All staff (Operations, Maintenance, Quality Control and Control System Specialists working at the SCFP are highly trained and qualified. All water treatment and distribution operations staff are certified by the Environmental Operators Certification Program, and maintenance staff are comprised of certified electricians, mechanics, instrument mechanics and millwrights.

INNOVATION

If you have implemented new technology, please help us share the information with your fellow Operators.





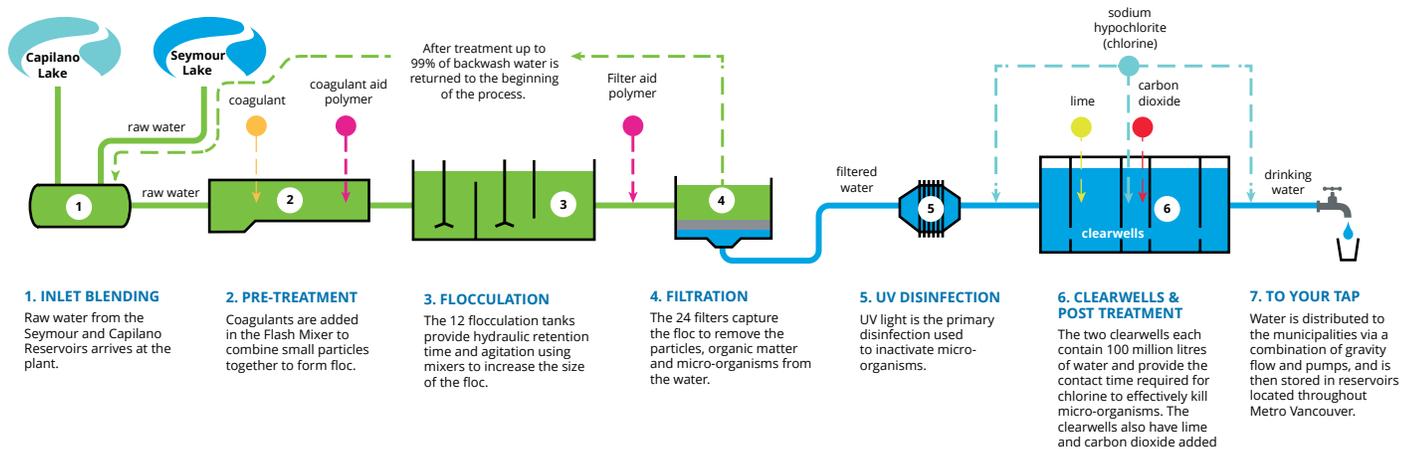
LEED® GOLD BUILDING

The Seymour-Capilano Filtration Plant follows LEED®, an international green building certification system committed to improving energy savings, water efficiency, and CO2 emissions reduction. LEED features are incorporated in all areas of the building and process.

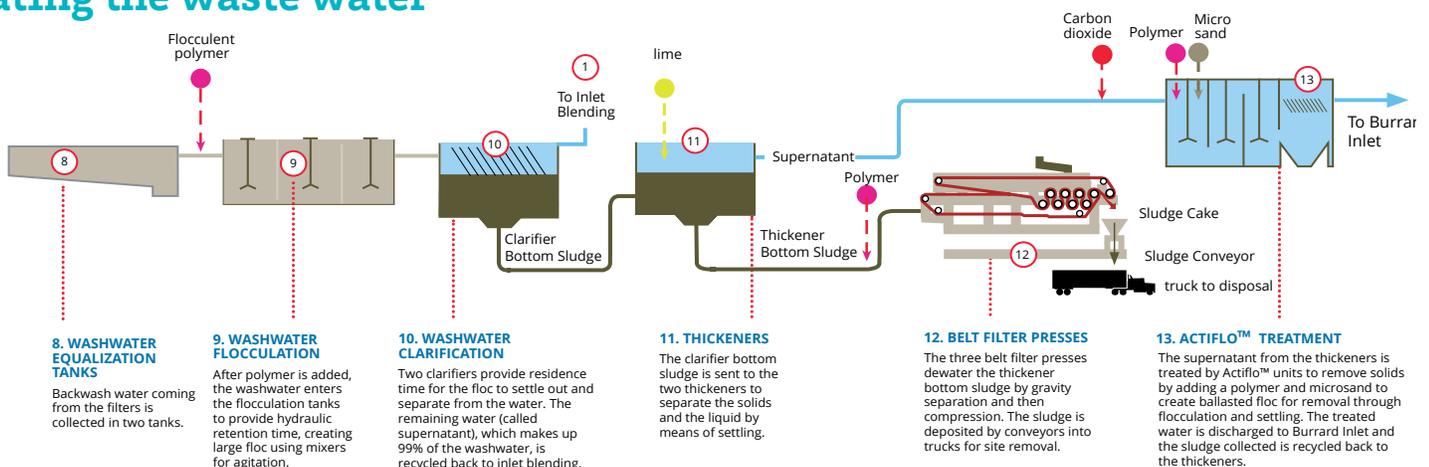
The LEED® green building rating system is a third-party certification program and an internationally accepted benchmark for the design, construction and operation of high performance green buildings.



The water filtration process



Treating the waste water



MEET THE NEW BOARD



Pat Miller, Chair

Pat joined Sun Peaks and developed the resort's telecommunications infrastructure. In 1996, she branched out from telecommunications to manage water, wastewater, and gas utility services for the resort community.

In 2002, Pat became a Certified Operator, and holds a Level III certificate in Water Treatment, and Level II certificates in Water Distribution, Wastewater Treatment, and Wastewater Collection. In 2011, Pat also gained a Level I Compost Operator certificate.

Pat believes in the industry and its Operators. In addition to her day job, she provides consulting services to assist small communities with infrastructure development. Pat also continues to share her knowledge through teaching water and wastewater courses with various educational organizations.

Pat became the first female Operator to sit on the board of EOCP, and was instrumental in bringing in the Multi-Utility Certification that benefits smaller utilities. Pat also sits on the Board of the Public Works Association of BC.

Pat was first elected to the EOCP Board of Directors in 2004.



Rob Fleming, Chair-Elect

Rob worked as Environmental Health Officer for twenty years with a focus on the water and wastewater industry, and applicable legislation. Rob has participated in various working groups for policy development from the local to provincial level. He has built many successful relationships with a collaborative approach when working with municipal, regional and senior government staff, as well as with other internal and external stakeholders. He has extensive knowledge of legislation, guidelines, and standards.

Rob brings energy and passion for water and wastewater management to the board along with his perspective as a regulator on system operations, and the challenges experienced regarding certification and classification.

Rob was elected to the EOCP Board of Directors in May 2015.



Darryl Bjorgaard, Treasurer

Darryl has worked in the water and waste water industry for thirty years, and currently runs a small water and wastewater company.

Darryl has been on the EOCP Board for ten years, and has found the role to be a very good learning experience.

Darryl is very committed to community volunteering with minor and old-timers hockey, Terrace Peaks Gymnastics, and Shames Mountain Co-op Ski Hill. Darryl also operates the ski hill's activated sludge plant, and drinking water system. He has also worked on some major projects in the North, most notably the Rio Tinto Aluminum Smelter Modernization project where he operated the water treatment plant. Darryl also works with local contractors and First Nations' groups trouble-shooting problems, and assisting with training.



Maurice Valcourt, Secretary

Maurice has been with Big White Ski Resort for (34) years. He started his career as a lift attendant and then the completion of his Red Seal Millwright. He then moved into the Shop Manager position where he completed a (5) year Heavy Duty Mechanic Apprenticeship.

When the Resort purchased the companies providing its Water and Sewer services, Maurice took on the managerial role. He has 24 years of experience in the utilities arena, and has been certified in the following areas: Level 3 Water Distribution, Level 2 Water Treatment, Level 2 Wastewater collection and Level 2 Wastewater Treatment.

Maurice was appointed Vice-President of Utilities in 1997 and has overseen the expansion and development of the Water, Sewer and Gas companies at the Resort.



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MEET THE NEW BOARD continued

Most recently, Maurice has been appointed to the Board of Directors for Big White Utilities, overseeing all aspects of the yearly operations. He also sits on the Big White Fire Committee Board, working with all levels of government. Maurice has a passion for the Resort and the outdoor activities it allows him to participate in with his family.

This is Maurice's first year on the EOCP Board and he looks forward to working with, and providing feedback to both the Board and its members.



**Mike Gosselin,
Past Chair**

Mike has more than 30 years' experience in the Wastewater Treatment Discipline, currently Managing the Wastewater Division for the City of Kelowna. Mike was on the EOCP Board for thirteen years serving in many capacities, most recently taking on the responsibility of President and CEO for eight years. Mike has a strong belief in the value of Operators and their positive impact on the systems and communities where they work.

Currently, Mike is serving as the Chair, Associated Boards of Certification, and is a member of the Okanagan College Public Advisory Committee for the Water Engineering Program.

Mike was elected to the EOCP Board of Directors in May 2003.



Peter Coxon, Director

Peter has more than 30 years of experience consulting on all aspects of water system planning, supply, treatment, design, and construction management.

Peter spends time with his clients, helping to optimize their water systems in ways that build long-term sustainability. He has worked for a wide variety of municipal, First Nations, and private clients in South Africa, Ontario, USA, British Columbia, and Alberta.

Peter has been with Urban Systems in Kamloops since 1993, and is currently a senior project leader and principal. Peter also assists with the leadership of the various

education and development programs undertaken by the Urban Systems Foundation in Uganda.

As an engineering consultant, Peter works with Operators quite often and sees some of the challenges they face. Peter views Operators as vital link in protecting public health and the environment, and as a designer of water and wastewater systems, he wants to ensure that they have the proper support, training and tools needed to do the job well.

Peter was elected to the EOCP Board of Directors in May 2016.

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Brian Dean, Director

Brian is the president of a small operations and training company (Dean Environmental Inc.) which operates out of rural Summerland B.C.

After graduating from Okanagan University College in Water Quality Technology in 1994 Brian has been involved extensively in training First Nations both in resources based surveillance techniques and infrastructure operation.

Currently, Brian is active in the Circuit Rider Training Program (CRTP) in 30 communities throughout the province. Most of the communities served under the CRTP have Operators running drinking water treatment facilities, distribution systems, and some wastewater treatment facilities, and collection systems.

When not out of town providing hands-on training to First Nations communities he is usually busy working on the family farm with his wife of 31 years, Laura. The

farm has horses, donkeys, chickens, and a thousand recently planted Christmas trees. Brian enjoys playing soccer, fixing fences, and horseback riding.

Brian was elected to the EOCP Board of Directors in May 2016.



John Kalinczuk, Director

John is a graduate of the Okanagan University College, in Water Quality Technology. After graduating, he worked for over ten years with the City of Salmon Arm in Wastewater and Water Treatment. He moved to Dawson Creek in 2011 as the resource manager / chief operator and currently holds WD IV, WT IV, WWT II, and WWC II certifications with EOCP.

John supports a healthy and sustainable water system through public tours, education and awareness campaigns, as well as presentations to City Council when required. Not only is John constantly looking to advance his knowledge through

additional certifications, he continues his leadership and supportive management technique to help his staff fulfill their goals. This often includes John encouraging those employees to seek further certifications or gain experience in different roles in the water system.

John was elected to the EOCP Board of Directors in May 2015.



Jim McQuarrie, Director

Jim has worked with Metro Vancouver in the Wastewater Treatment Division for the past thirty-four years. He has held a level IV Municipal Wastewater Treatment Operator Certificate since 1998.

During his time with Metro he has watched the Environmental Operators Certification Program grow, and has directly benefited from the professional respect and increased career advancement opportunities the Program has provided.

Jim appreciates what the Program has done for

him and his colleagues, and has volunteered with the Training Registry as a Subject Matter Expert (SME), and most recently has volunteered his time during the development and pilot-testing of EOCP's new Facility Classification models.

Jim was elected to the EOCP Board of Directors in August 2016.



Bob Smith, Director

Bob Smith has been on the board since 2010 and is currently working at the District of Squamish as Director of Public Works. Bob previously was with the City of Kimberley and has owned a snowboard manufacturing company, a restaurant and a flower shop. Bob is the Management representative on the EOCP board.

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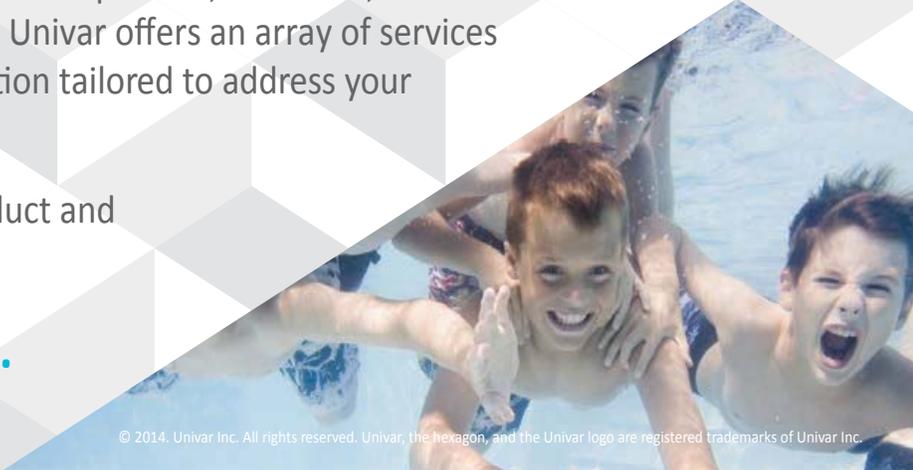


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STATISTICS

June 1 to August 31, 2016



Exams

- 175 Operators have written exams during this period
- 120 were web based
- 55 were paper based

Continuing Education Units (CEUs)

- 2,053 CEU submissions
- 3,122.21 CEUs earned
- 31,222 hours of training taken by Operators

Facilities

- 46 facilities were added or upgraded during this time

Definitions

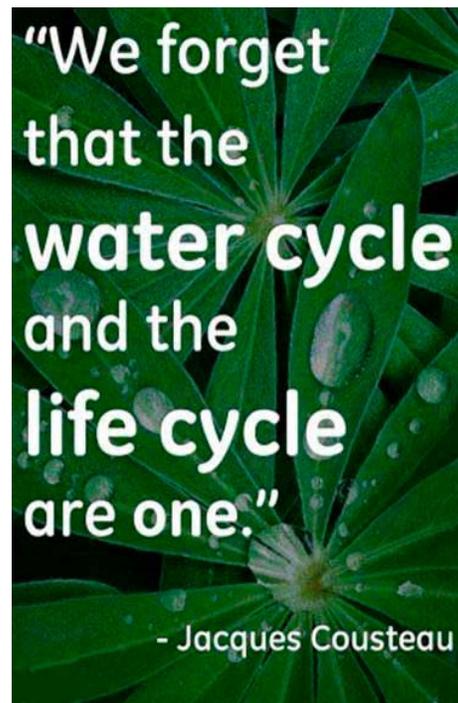
| | |
|------|---------------------------------|
| WD | Water Distribution |
| WT | Water Treatment |
| WWC | Wastewater Collection |
| WWT | Wastewater Treatment |
| IWWT | Industrial Wastewater Treatment |
| BWD | Bulk Water Delivery |
| SWS | Small Water System |
| SWWS | Small Wastewater System |

FACILITY CLASSIFICATION to August 31, 2016

| Classification | IV | III | II | I | Other | Total |
|----------------|----|-----|-----|-----|-------|-------|
| WD | 33 | 54 | 171 | 161 | | 419 |
| WT | 19 | 40 | 129 | 43 | | 231 |
| WWC | 14 | 21 | 79 | 96 | | 210 |
| WWT | 25 | 29 | 108 | 90 | | 252 |
| IWWT | 2 | 1 | 5 | 1 | | 9 |
| SWS | | | | | 858 | 853 |
| SWWS | | | | | 216 | 216 |
| Total | | | | | | 2,190 |

OPERATOR CERTIFICATION June 1 to Aug 31, 2016

| Classification | IV | III | II | MUII | I | MUI | OIT | Total |
|----------------|-----|-----|-------|------|-------|-----|-----|-------|
| WD | 84 | 207 | 851 | 8 | 894 | 17 | 70 | 2,131 |
| WT | 47 | 68 | 195 | 6 | 357 | 8 | 58 | 739 |
| WWC | 12 | 71 | 521 | 8 | 700 | 16 | 43 | 1,371 |
| WWT | 122 | 145 | 240 | 6 | 308 | 16 | 57 | 894 |
| IWWT | | 4 | 15 | | 17 | | | 36 |
| Total | 265 | 495 | 1,822 | 28 | 2,276 | 57 | 228 | 5,171 |
| BWD | | | | | | | | 52 |
| SWS | | | | | | | | 977 |
| SWWS | | | | | | | | 320 |
| Total | | | | | | | | 6,520 |



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