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MARCH 2011 • NUMBER 121

# BRITISH COLUMBIA OPERATORS Digest



## AGM

### Announcement

Stay tuned, the EOCP will be contacting you with the location and date of this year's AGM in a future email. Keep checking our website at [www.eocp.org](http://www.eocp.org).

## ABC Corner

### Exciting year ahead for ABC members

PHOENIX – The Association of Boards of Certification (ABC), an organization representing environmental certification programs around the globe, is looking ahead to an exciting year of implementing initiatives driven by program members. In January, ABC hosted a Validation & Examination (V&E) workshop for the Water Treatment, Distribution, Wastewater Treatment and Collection V&E committees. Subject Matter Experts took part in analyzing the results of ABC's recent Job Task Analysis (JTA).

British Columbia had three Operators taking part in this process. Mike Gosselin and John Reynolds participated in the Wastewater Treatment V&E process while Brian Thorburn chaired the Water Treatment V&E meeting. The recent JTA survey will be used to develop ABC's Need to Know Criteria and the 2011 standardized exams.

The JTA surveys are part of a larger revalidation process for ABC's water treatment, wastewater treatment, collection



*ABC Validation & Examination Committee members met in Phoenix-Scottsdale, Arizona on January 24-25, 2011.*

and distribution exam disciplines. The results of a third-party psychometric audit in spring 2010 encouraged the ABC Board of Directors to revalidate the current operator job analyses in order to maintain compliance with the highest industry standards and seek recognized accreditation of ABC exams and certifications. For more information on ABC, please visit [www.abccert.org](http://www.abccert.org).

**EOCP Newsletter Going Green:** In an effort to become even more environmentally responsible and also to reduce expenses, the EOCP is encouraging Operators to choose an electronic copy of the newsletter in the future. For all Operators for whom we have an email address we will send out the Fall issue electronically and you will receive it at least a week before the printed version. If you wish to continue to also receive a hard copy by mail, please tell us in an email to the office at [eocp@eocp.org](mailto:eocp@eocp.org). If on the other hand you let us know by email that you prefer to receive it electronically we will enter your name in a draw for \$100.

## 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](mailto: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

201 – 3833 Henning Drive  
Burnaby, BC V5C 6N5

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WEB: [www.eocp.org](http://www.eocp.org)

### EOCP OFFICE STAFF

**Bill Hyslop** Executive Director

**Kim Eames** Office Manager

**Stephanie Hall** Office Assistant

**Heather Wallace** Office Assistant

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 and up to date members.

### 2010 Board of Directors

**Mike Gosselin** – President

**Pat Miller** – Vice President

**Brian Thorburn** – Treasurer

**Chris Brown** – Secretary

**Steve Benoit**

**Tim Lambert**

**Bob L. Smith**

**Shawn Sanders**

**Darryl Bjorgaard**

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## EOCP Elections

The EOCP Board elections are coming up. Do you want to make a difference? Do you know someone you think will make a difference? Nominate a fellow Operator, a Consultant or Government Representative for the upcoming EOCP Director Elections in 2011. Any Operator that is in good standing is eligible to run for EOCP Board director. There are 4 director positions to be filled in 2011! Make your vote count! Contact the EOCP office if you want to nominate someone for the upcoming EOCP elections.

## 2011 EOCP Certification Board Elections

This year's nominating committee members are Chris Brown, Bob Smith, and Sean Lefebvre.

There are four positions available on the board to be filled by two Operators, one Government Representative and one Consultant Representative. Each position is for a two-year term. The following candidates have been nominated so far:

OPERATORS: **Mike Gosselin**  
**Brian Thorburn**

GOVERNMENT  
REPRESENTATIVE: **Tim Lambert**

CONSULTANT  
REPRESENTATIVE: **Shawn Sanders**

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, 2011. Ballots will then be mailed out to operators in good standing.

## Digest Advertising Opportunities

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

## 2010 Financials

Description	Actual F2010	Budget F2010	Actual F2009
<b>INCOME</b>			
Certification Dues	\$253,254	\$231,500	\$184,371
Course Assessments and CEU Tracking	26,658	31,000	24,503
Operator Exam Fees	132,523	120,500	87,625
Facility Classification Fees	54,065	39,650	31,906
Administration Revenue			4,300
Other Income including grants	130,800	201,910	282,898
<b>Total Revenue</b>	<b>\$597,300</b>	<b>\$624,560</b>	<b>\$615,603</b>
<b>EXPENSES</b>			
ABC Expenses	\$ 26,104	\$ 25,460	\$ 22,733
AGM (EOCP) and Election	2,296	3,980	175
Business Plan Tasks	28,980	58,502	21,865
Computer System Expenses	12,772	16,500	3,700
Conferences	5,475	6,058	848
Exam Expenses	5,250	9,300	4,407
Office and General Expenses	35,276	36,600	26,552
Office Occupancy Expenses	31,227	30,744	30,901
Operator Digest Expenses	11,237	21,000	14,826
Professional Fees	7,150	26,100	12,176
Salaries and Benefits	246,969	250,158	233,268
Scholarship and Gifts Expenses	2,620	4,500	4,369
Staff Expenses	2,649	2,350	1,018
Training Registry Program Development & Operation	41,551	39,650	93,480
Training Registry Travelling Roadshow	32,130	47,100	
TR – SME Training & Coordination	10,300	35,600	
Other Expenses	26,632	46,479	29,372
<b>Total Expenses</b>	<b>\$528,618</b>	<b>\$660,081</b>	<b>\$499,690</b>
<b>Surplus/Deficit</b>	<b>\$ 68,682</b>	<b>-\$ 35,521</b>	<b>\$115,913</b>

2010 was a better year financially then expected for the EOCP. This was the first surplus in a few years. Total expenses were lower then expected but revenue has dropped as well. In 2011, the EOCP should be better off financially and it is expected that further rate increases will not be required for a while to ensure the continued operation of the certification program in British Columbia.

## Operator Pictures or Videos!

Do you have a picture worth printing? Send it in to the editor at [bthorburn@eocp.org](mailto:bthorburn@eocp.org) along with a little explanation and we will publish it in the next newsletter.

This pump impellor was making noises for some time but it was back ordered. As it could not be taken out of service until the new impellor was delivered, it continued to be used and continued to pump but not at its "peak" rate. Upon arrival of the new impellor, the old one was taken out and cleaned. This is all that was left of it. Thanks to Chris Brown from French Creek Pollution Control Centre for this picture.

**Can you spot the broken impellor?**





# Dockside Green – Victoria BC

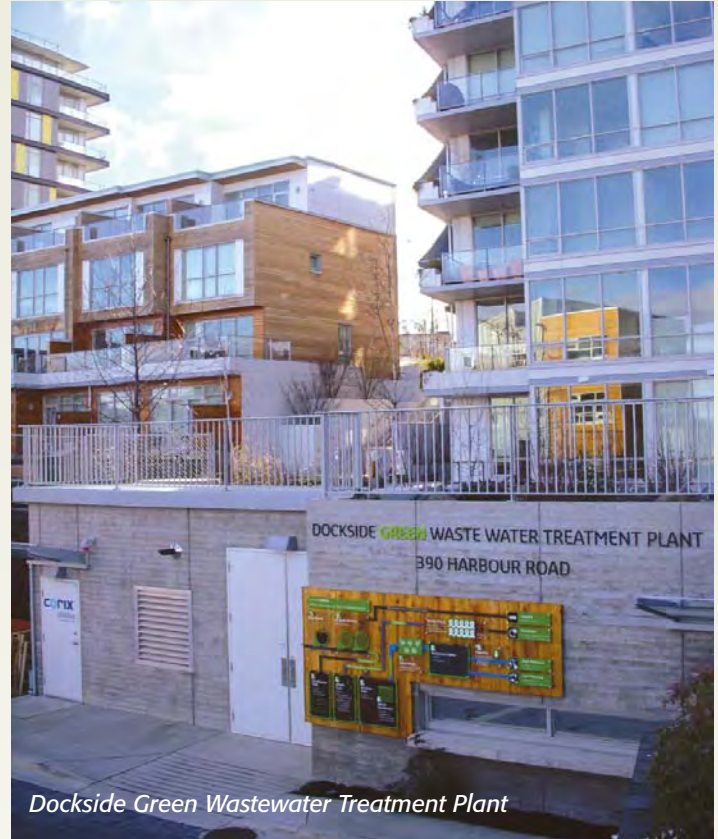
## Development

Dockside Green is a 15-acre award-winning development that includes residential, retail, office, and light industrial uses and extensive public amenities. Once completed, Dockside Green will include 26 buildings totaling 1.3 million square feet and be home to about 2,500 people in three neighborhoods — Dockside Wharf to start, followed by Dockside Commons and Dockside Village. Superior building practices and extensive community planning are transforming the site from a contaminated industrial wasteland into a healthy, lively community. The entire project is targeting LEED® Platinum designation with the first two residential phases and first commercial phase already reaching this goal.

## Wastewater Treatment Plant

The wastewater treatment plant was built directly adjacent to a popular bakery and coffee shop within the development. Being built ‘underground’ the treatment plant is roofed with a walkway, waterway features and greenery which allow this highly technical treatment plant to blend in. Dockside is a fully automated treatment system by the use of SCADA.

The process was built around the Zenon Zeeweed Membrane technology. There are 2 trains within the treatment plant with the capacity to treat all the wastewater at full develop-



*Dockside Green Wastewater Treatment Plant*

ment without upgrades or additions.

The wastewater is screened through one of two Huber screens, collected in the Equalization Tank and then pumped into the process. The biological portion of the treatment plant consists of an Anoxic

zone for nitrate removal and an Aeration zone for BOD removal and ammonia conversion. The water then flows into the membrane tank. The membranes are a hollow ‘spaghetti-like’ construction that filters the clean water into the center of these strands by vacuum. This treated water travels through a Trojan UV disinfection stage before storage and discharge. Excess sludge is sent to a screw press dewatering unit. Onsite chemical addition controls alkalinity and pH of the effluent. The use of a Sol-Air (UV) system eliminates foul-air being discharged to the environment.

## Statistics

Design Flow:	380m <sup>3</sup> /day
Average Flow:	100m <sup>3</sup> /day
Total Plant Volume:	740m <sup>3</sup>
Average Retention Time:	5.5 days



### Effluent Discharge

Effluent from Dockside WWTP is discharged one of two ways. A High Pressure system delivers treated water back to the toilets and roof-top gardens throughout the whole development while a Low Pressure system maintains the water level in a development-length waterway and is used for irrigation during summer months. The waterway is designed to collect all the rainwater from the development along with the treated effluent. If the level in the waterway gets too high it automatically overflows out a diffuser into the Victoria Harbour. This waterway is stocked with fish



and crayfish and is a local hangout for ducks and otters.

### Analytical Data

The Dockside Wastewater Treatment Plant is a Class IV Wastewater Treatment Plant as classified by the Environmental Operators Certification Program that regularly meets and exceeds the Effluent Requirements laid out in the Operational Certificate (at right).

### Gasification Facility

In addition to the wastewater treatment plant, Dockside Green Development also has an onsite heat generation facility. This 'biomass' facility gasifies woodchips to create 'syngas'. The gas is used as a fuel source for a boiler. This heat is then transferred to the whole development for heating of living spaces and hot water through heat exchangers. This facility has the ability to create 2 MW of thermal heat.

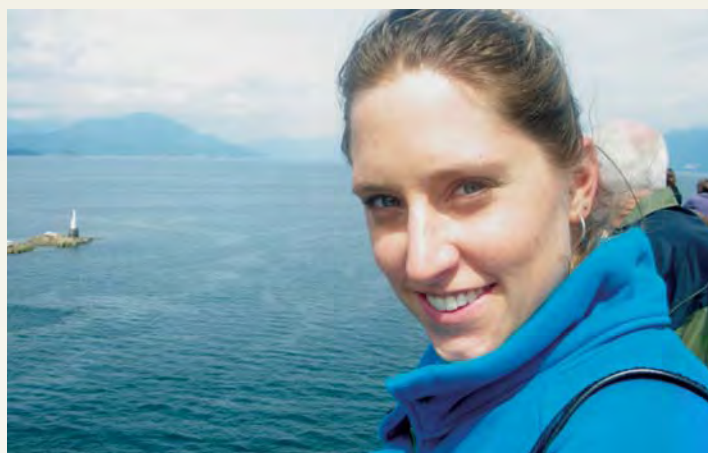
Both facilities are operated by Corix Utilities. Thanks to Shantelle Clarke from Corix Utilities for the profile.

### Effluent Quality Requirements:

Suspended Solids:	< 5.0mg/L
BOD:	< 10.0mg/L
Coliforms:	< 2.2 CFU/100mL
Total Phosphorus:	< 1.0mg/L
Total Nitrogen:	< 10.0 mg/L
Ammonia Nitrogen:	< 1.0 mg/L

### Operator Profile

### Shantelle Clarke



**Shantelle** graduated from the Water Quality Technology Program from Okanagan University College in 2002. She moved directly into operating a treatment facility in Pemberton, BC. This move gave her the opportunity to learn both RBC and SBR treatment. After spending a couple years there she moved back home to the Okanagan and worked at the City of Penticton Advanced Wastewater Treatment Plant. This plant introduced and taught her BNR treatment, primary and secondary clarification, anaerobic digestion, fermentation, sand filtration, chlorine disinfection, and liftstation operation. She was also able to obtain her MWWT-III at this point of her career. When the opportunity presented itself, Shantelle moved her skills to Lake Country and became the Operations Manager for the wastewater treatment plant, liftstations, and package plants located within the District. She had a key role in implementing a preventative maintenance program throughout the District for both water and wastewater and assisted with the Liquid Waste Management Plan development until her move to Victoria in 2009. Originally Shantelle was the Senior Utility Operator for Corix Utilities operating the wastewater treatment plant for Dockside Green, a LEEDS Platinum development in downtown Victoria. This position has now developed into overseeing operations of all coastal wastewater treatment plants operated by Corix Utilities. During all this she was also an instructor for BCWWA and is now embarking on her new adventure of teaching for Thompson Rivers University.



# The Benefits of Continuing Education

**S**ome Operators may feel “I’ve been doing this job for over 15 years and I know all that I need to know” while others are more prone to embrace continuing education. As an Operator that has been doing water and wastewater for over 15 years, the older that I get, the more I realize that I have much more to learn.

Virtually all provinces and states require Operators to earn a specific number of CEUs every certification cycle in order to maintain their certification. Typically, an average of 1.2 CEUs each year are required to maintain your certification in your field. Looking at the big picture, 24 hours of contact time every 2 years or 12 hours per year is not a large time frame. Numerous different courses can be taken over this time that add up to the required contact time. Where it gets a little trickier is when an Operator is certified in more than one discipline. In BC they are required to achieve a minimum of 25% of the CEUs per discipline if they are certified in multiple fields. Taking continuing education is beneficial to any Operator in order to retain their certification, learn new technologies, and increase your knowledge.

Any relevant conference or seminar an Operator attends can be worth valuable CEUs. Always make sure to register and confirm that your attendance at any conference or seminar is recorded to ensure that you receive any CEUs that are offered. Your employer is usually paying for you to attend to retain your Operator

certification so it is worthwhile to make sure that you are registered and signed in. These same CEU’s will be included in your totals when you chose to write the higher certification levels such as Class III and Class IV exams.

Without continuing education, all the new technology that is in the water and wastewater field might not be utilized. It is forever changing. Some Operators complain there are no courses available that would interest them. Google the words; “Continuing Education for Water and Wastewater Operators.” Over **200,000** results will be shown and although many are not what you are looking for, there are lots that are beneficial and educational. These days there are nearly endless opportunities for Operators to continue their educational pursuit and learn something new. New technology is constantly changing so it’s great to try to get ahead of the curve. Take a course in water treatment on membrane filtration or dissolved air floatation or in wastewater treatment on advanced tertiary treatment.

Distance education has been around for continuing education for many years now. Years ago, the Sacramento State Water Program (now California State University) developed many courses for Operators and were able to deliver these courses internationally. Different distance education training programs have been developed recently such as Thompson Rivers University Water Treatment

Technology Program. Distance education can be done at work with your employer’s permission. Many utilities will allow Operators time during the day to work on these courses as it will save them travel costs to attend some face to face courses. As well, distance education courses are usually much more economical than face to face courses.

Discipline is the key issue though when it comes to distance education. Whether working on the course at work or at home when you are away from work requires time and determination. Some Operators will start courses and will be too busy to finish them due to the requirements of work and personal time. Set up a daily or weekly time to work on your distance education course and don’t get discouraged if you fall behind. Most distance education suppliers will grant extensions for Operators taking their courses as they know how busy Operators can be.

## Upcoming Conferences and Workshops

**Water Supply Association of BC**  
March 24th and 25th  
[www.wsabc.com](http://www.wsabc.com)

**BCWWA**  
April 16th to 20th  
[www.bcwwa.org](http://www.bcwwa.org)

**Coastal Water Supply Association**  
May 27th and 28th  
[www.cwsa.net](http://www.cwsa.net)

**Public Works Association of BC**  
Sept. 26th to 29th  
[www.pwabc.cpwa.net](http://www.pwabc.cpwa.net)

# Multi Utility Update...

## How I got more money sooner, doing what I enjoy – working for a Utility

I started working for Sun Peaks Utilities in February 2007, eighteen months before the Multi-Utility category was created. The Utility agreed to provide my work experience and training. Sun Peaks Utilities has 4 utilities that I work in and thus split my time up between the 4. Under the EOCP normal rules to become a certified operator, it may have taken me longer to become certified in all of the disciplines. What's worse is that I would have had to wait to get paid as a fully certified operator. But with the Multi-Utility certification option, I was eligible to get my operator certification for Level I Water Treatment, and MU-Level I in Water Distribution and Wastewater Treatment with the associated increase in pay within thirty (30) months instead of the forty-two (42) months it would have taken without the Multi-Utility category. If you work in two or more utilities serving less than 10,000 people, check out Multi-Utility Certification at [www.eocp.org](http://www.eocp.org) and see if it applies to you.

Who knows, you may get a raise sooner than you expected.

Sincerely,

**Nate Kalinocka,**

EOCP Certified Operator #6364

WD-I, WT-I, MWWT-MUI



**Nate Kalinocka**



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## The Training Registry is here. Are You Ready?

**T**he EOCP has launched the Training Registry. Earning CEU's has never been better. Numerous road shows have taken place over the province over the last 6 months illustrating the benefits of the Training Registry.

One of the best features of the Training Registry is the improvement of opportunities for in-house training. As all Operators are aware, most locations within the province do not have the same training opportunities of a few larger cities. With the launch of the Training Registry, approved, in-house training is more than just a possibility. If you are knowledgeable in a work related subject, enjoy teaching or mentoring fellow Operators, here is your chance to make a difference. You can earn CEU's and provide EOCP accredited training to your fellow Operators by following a simple process of developing a course or workshop. You will need a couple of references to start with once you have chosen the topics that you feel you are able to instruct. Submit this to the Training Registry online for approval. Once you are approved by Subject Matter Expert reviews, you are a Recognized Instructor. From there you can teach an existing course if you have that course writer's permission or you can develop your own course by following the simple procedure on line. Visit the EOCP website at [www.eocp.org](http://www.eocp.org) for more information or email the Training Registry at [trainingregistry@eocp.org](mailto:trainingregistry@eocp.org). You too can be an instructor by following the simple process and templates provided in the Training Registry that can be seen on the website. Get involved!

## Operator Tools



This tool was made for servicing fire hydrants. The middle of the key goes on the operator nut or hydrant cap and the various sockets welded on the four sides all match a specific brand of hydrant. Do you have a tool that you want to share? Email the editor at [eocp@eocp.org](mailto:eocp@eocp.org) with your invention.

*Fabricated hydrant wrench and sockets*



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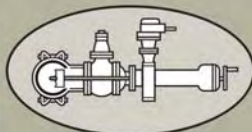
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# 2011 Association of Board of Certification (ABC) Annual Conference

The Environmental Operators Certification Program of BC was well represented at the ABC Conference in January 2011. BC currently has two Directors on the ABC Board for 2011.

The annual conference was an exciting event as certification news and regulation were discussed daily. As part of this year's conference, EOCP President, **Mike Gosselin** presented a paper on EOCP's Training Registry which was well received.

Mike Gosselin presenting at the ABC Conference



Bill Hyslop receiving award from Bob Hoyt



## Bill Hyslop Receives Robert C. McAnespie Outstanding Certification Officer Award

**Bill Hyslop** was recognized by his peers at ABC for his invaluable work over the years with EOCP and his involvement with the certification program. Bill has spent over 40 years in the water and wastewater field and has been involved with EOCP since its inception. Congratulations Bill!

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## Check it out!

**David MacDonald** works for the City of Burnaby and was called into service after a car hit a fire hydrant. The video starts off and all you can see is a geyser of water and a guy holding an orange construction sign into the water. As the water level goes down, David MacDonald is revealed to have been standing in the geyser of water in his white shirt, jeans, and work boots. You can also see the firemen just watching David do his thing.

<http://www.youtube.com/watch?v=fwKXusGhdpg>



## Top Ops Kelowna 2011

*The Top Ops Competition at the BCWWA Conference is taking place in Kelowna this year. If you have a team or if you are a single Operator looking for a team, contact the EOCP and we will find you a team. You can also sign up at the conference registration as well.*

## SAFETY CORNER

### Lock Out

*Don't forget to lock out equipment when performing maintenance on it. Needless accidents occur annually because equipment is still energized when maintenance is performed on it. Always follow your utility's lock out procedure and check equipment to ensure that it is off before starting work on it!*

Please visit Worksafe BC at [www.worksafebc.com/](http://www.worksafebc.com/) for more information.

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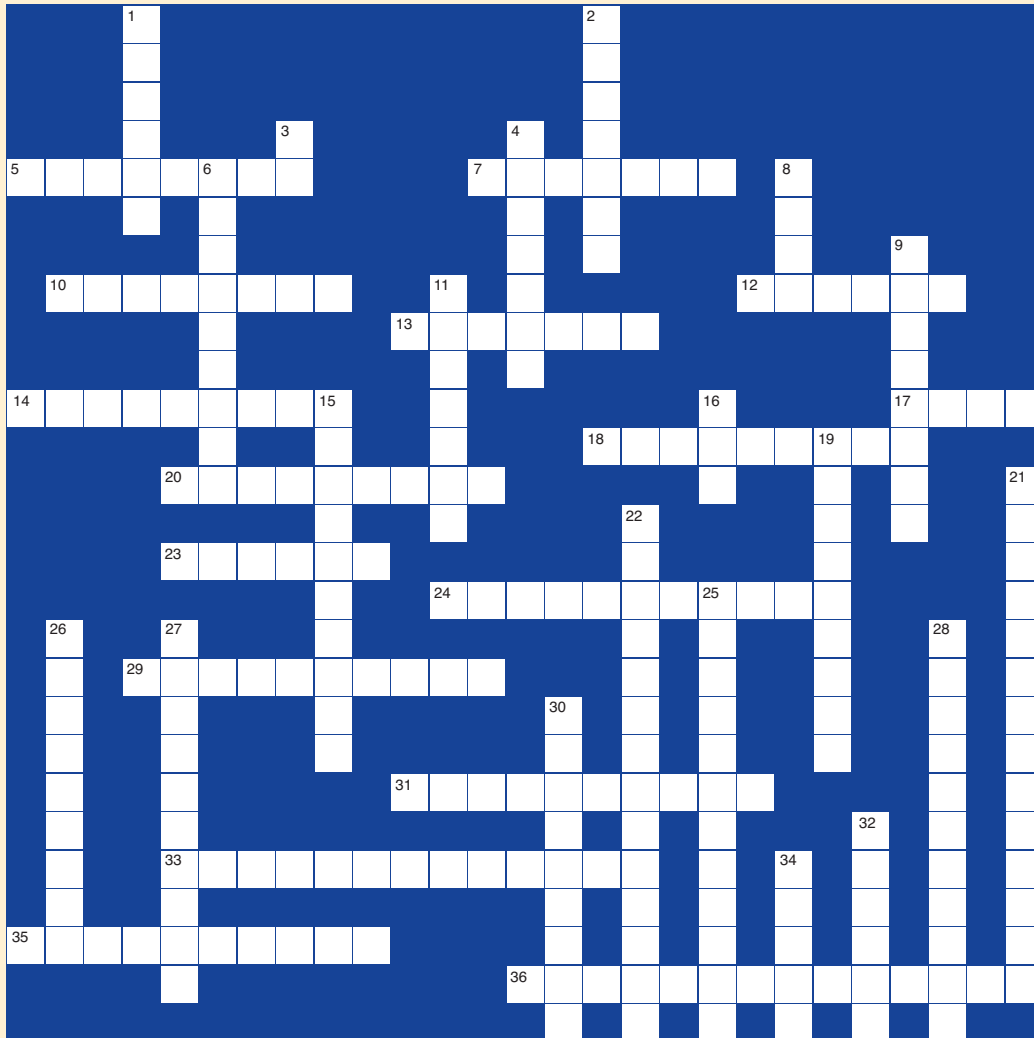
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# Water and Wastewater Terms

Send in your correct answers to the EOCP office by fax or email to be eligible to win a prize.



## ACROSS

- 5 an indicator organism
- 7 an organism found in wastewater
- 10 the difference between the static and pumping level
- 12 a connection made under pressure
- 13 coming from the intestine
- 14 a liver disease caused by a virus
- 17 standard that all fire protection is regulated by
- 18 cannot be dissolved in water
- 20 organisms that live without the use of oxygen
- 23 the equivalent weight of an acid
- 24 organisms that can live under aerobic and anaerobic conditions
- 29 the point where no more chemical can dissolve into a solution
- 31 the taking in of a substance by another
- 33 found inside a certain type of pipe or valve
- 35 a chemical reaction between a compound and water
- 36 layers of a lake

## DOWN

- 1 lacking oxygen
- 2 a material used to soften water
- 3 a measure of the food available to an aeration basin
- 4 a long chain of molecules bound together
- 6 the loss of an electron
- 8 abbreviation used for colour measurements
- 9 compounds that can cause scale on pipe
- 11 having a negative charge
- 15 a surface acting agent
- 16 measure of the organic strength of wastewater
- 19 a wastewater process that removes nutrients
- 21 the removal of dissolved gases from a liquid
- 22 an electrical force around a particle
- 25 organisms that thrive under specific temperatures
- 26 the resistance of a fluid to flow
- 27 loud noises in a pump is an indication of this
- 28 having a strong aversion to water
- 30 measurement of light scatter
- 32 a unit of pressure
- 34 the material removed from an excavation

# NEW OPERATORS AND OPERATOR UPGRADES!

Check out the newest and latest upgrades on Operator status. Go to the EOCP website and click on the Operator Highlights Tab and then Click on New Operators for an up to date list.

Many Operators have not been keeping their certification valid by either not paying their annual dues or by not fulfilling the CEU requirement. If your facility requires a certain level of certified Operator and you have let your certification lapse, you or your utility could be in violation of your Permit to Operate. The table to the right indicates the Operators who had already paid their 2011 dues by the end of January. Please contact us so we may help you get back into "Good Standing" again.

## FACILITY CLASSIFICATION TO JANUARY 31, 2011

Classification	IV	III	II	I	Other	Total
WD	31	50	149	167		397
WT	16	31	61	12		120
WWC	17	12	60	86		175
MMT	21	31	101	135		288
IWWT	1	1	2	0		4
SWS					797	797
SWWS					175	175
<b>Total</b>	<b>86</b>	<b>125</b>	<b>373</b>	<b>400</b>	<b>972</b>	<b>1956</b>

## OPERATOR CLASSIFICATION TO JANUARY 31, 2011 C-2011 TO PRESENT

Classification	IV	III	II	MUII	I	MUI	OIT	Total
WD	13	53	258	3	477	2	41	847
WT	5	19	65		127		10	226
WWC		14	107		234	1	9	365
MWWT	28	81	145	1	202	1	30	488
IWWT		1	5		6			12
BWD								7
SWS								243
SWWS						L28	M36	64
CH								151



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