

BRITISH COLUMBIA OPERATORS DIGEST

A NEWSLETTER FOR WATER
AND WASTEWATER OPERATORS

DECEMBER 2001 • NUMBER 103

Plant Profile – Vancouver Aquarium Marine Science Centre

The Vancouver Aquarium is well known for its accomplishments in heightening the public's awareness of the importance of aquatic environments. The display of fish and animals in habitats that resemble their natural homes, gives people a window to the aquatic world that few could access any other way. Keeping animals healthy at Vancouver Aquarium is not a simple feat and would not be possible without its Class III Water Treatment Plant.

Important facts:

- Plant classification – Water Treatment Class III
- Fresh water source – City of Vancouver domestic water. Rapid pressure sand filters and activated carbon provide primary filtration.
- Salt-water source – Vancouver harbor. Rapid open bed sand filters provide primary filtration.
- Secondary filtration is provided by rapid open bed sand filters, pressure sand filters, vacuum diatomaceous earth filters, screen drum filters, foam fractionators and biological filtration.
- Disinfection is accomplished with ozone, UV light, and sodium hypochlorite.



Dolphin Training

- Total water on site in displays and reservoirs is 9690 cubic meters. (9245 cubic metres salt, 445 cubic metres fresh)
- The water in the complex is continually recirculated from reservoirs – to animal tanks – to filters – and back to reservoirs.
- The total volume of water is recirculated through filters every 125 minutes. This equates to a total volume of 111,059 cubic metres pumped in 24 hours.

Seawater is pumped from Burrard inlet by two vertical turbine pumps, to three one hundred square foot rapid sand filters. The maximum flow rate is 4500 litres per minute with the average being 2700 litres per minute. The

Continued on page 4

WHAT'S INSIDE THIS ISSUE

Dan Skidmore, EOCP Director	2
Board Business Briefs	3
Operator Profile: Kent Hannestad	6
Word Games	7
Small Water System Operator Profile	8
New Members and Upgrades	9
Upcoming Events	12

Environmental Operators Certification Program

The BC Operators Digest is the official newsletter of the Program. Submissions for publication in the Digest are welcome and may be sent to the Editor:

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Business card sized advertisement space is available at \$50.00 per issue or \$175.00 for four issues. GST and PST included. For other sized advertisements, please contact the Editor.

The Environmental Operators Certification Program is a charter member of the Association of Boards of Certification, and is a Registered Society with over 1,700 active members.

2001/2002 BOARD OF DIRECTORS

- Joe McGowan** – Chairman
- Bill Hyslop** – Industrial Waste
- Bernie Taekema** – Facilities Classification
- Kevin Ramsay** – BCWWA Liaison
- Leo Albrecht** – CEU Assessment
- Don Gare** – Digest Editor
- Eric Jackson** – Treasurer
- Al Lane** – Secretary
- Dan Skidmore** – Director



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Dan Skidmore, EOCB Director

“I started my career in 1988 with the Municipality of Surrey which is now the City of Surrey. I started at age eighteen in the water maintenance department where I learned many of the tricks of the trade. I was transferred over to Water Construction where I learned more than I would ever imagine about installation of water mains. After a brief stay in Public Works I returned to Water Construction which I really enjoyed.



Dan Skidmore

In 1995 I decided to broaden my horizons and took the position of Water – Wastewater Operator for the District of 100 Mile House. This position gave me more opportunity to work in the wastewater end of the industry along with water treatment.

The District has a slow sand filter water treatment plant with a well system to assist. On the wastewater side the District has a lift station, aerated lagoon and spray irrigation system. At this time one certified operator operates and maintains the system.

Shortly after arriving in 100 Mile House the certification subject came up. It was a challenge that I really was looking forward to. I wrote my first exam and was hooked on the program. I now hold level I wastewater treatment, level II wastewater collection, level II water treatment and level III water distribution. Chlorination and cross connection control are some of the other certificates I hold. I also pursued and obtained level II water treatment with the State of Hawaii, Board of Certification of Operating Personnel in Water Treatment Plants.

Presently I am working on a Bachelor of Administration in Management through Athabasca University in Alberta. I strongly believe in continued education and certification for operators. Since I was committed to the idea of certification I decided to run for the Environmental Operators Certification Program Board. It was time to give back to the program that certified me. In May this year the members elected me to the Board.

I love the Cariboo area for all its natural beauty and great fishing. I love the outdoors so I carry the most important water tool in my truck for the ride home... my fishing rod. This is a great area in which to live and work.

If you are passing through the area, stop in for a tour of our plant or maybe a hint to a great fishing lake.”

Board Business Briefs

Recent business from the EOCB Board Meeting held at the EOCB Office in Burnaby on October 1, 2001. Directors present: Joe McGowan (Chairman), Eric Jackson, Bill Hyslop, Dan Skidmore, Kevin Ramsay, Leo Albrecht, Al Lane, and Don Gare.

The Chairman welcomed new Director Dan Skidmore to the Board.

- **Treasurer's Report:**

Eric Jackson, Treasurer presented a detailed yearly comparison report, which included the following totals:

Revenue:	\$ 137,181.05
Expenses:	\$ 127,050.58
Difference:	\$ 10,130.47
Bank Balance (May 5/01)	\$ 29,537.82
GIC's invested (2):	\$ 55,908.23
Mutual Funds	\$ 14,596.87
Total Assets	\$ 100,042.92

- The Chairman reported that a cheque in the amount of \$20,000.00 will be forthcoming from the Ministry of Health to assist the EOCB with operating costs and manpower to facilitate certification of small water system operators in B.C.
- Kevin Ramsay reported that the BCWWA is busy training instructors for Small Water System courses. There was a 2 day Train the Trainer course given in September for SWS instructors. The Ministry of Health is getting good support for the SWS course. First Nations are also taking part in the SWS course.
A one-day seminar regarding water supplies will be given with the RCMP because of the New York Twin Tower disaster.
BCWWA had a survey commissioned for \$20,000.00 to obtain a review of their services. The study showed that BCWWA should key in on Vancouver Island and that BCWWA is lacking in safety training and pump training. All EOCB Directors will get a copy of the BCWWA survey for comments at the next meeting. The EOCB may benefit from the report.
- Eric Jackson indicated that the Annual Report was filed with the provincial government in June.

- A letter was sent to BCWWA requesting financial assistance to process small water system operators and the cost of invigilators for the exams. BCWWA declined our request. The EOCB then made an application to the Ministry of Health for financial support.
- Inhouse Computer Exam Scanning, Scoring and Summary Sheets:
 - a software program is available (used by universities).
 - site license is \$1500 Canadian
 - mark reader option and basic option
 - hardware is approximately \$3800 Canadian
 - onsite training is available - \$300 per day
 - 2-3 days training needed
 - could create soft copies of exams
 - total expenditure would be \$7500 Canadian.
 The Board is willing to spend up to \$10,000 on hardware, software and training.
- EOCB Agreement with ABC Re Marking Own Exams: The EOCB owns Industrial WWT Level I-IV exams, Small Water System Operator Exams and Small Wastewater System Operator Exams.
 - Are we going to stay with ABC exam services?
 - How do we ensure that reciprocity continues to take place?
 - The EOCB will send a letter stating that we wish to remain an active member of ABC, but with our low Canadian dollar, it is very difficult financially to continue in this manner. Ontario has an agreement with ABC to pay \$9.00 per exam used, but mark their own exams. We need to know what ABC's policy is.
- The EOCB has had an inquiry regarding certification for landfill operators. The EOCB is interested in getting more information re: landfill operator certification, what the expectations are, what other jurisdictions certify landfill operators, etc. The Chairman will send a letter to the Southern Interior Waste Managers Association to propose a meeting of the two groups.
- A luncheon will once again be sponsored by the EOCB at the UBC Operators Symposium.
- The Board will wait until December 1, 2001 to decide whether to have a Director attend the ABC annual conference in Texas from January 22-25, 2002.
- The Board approved the purchase of a scanner for the Board Office.
- The next Board Meeting will be held in the Burnaby Office in early February, 2002.

Vancouver Aquarium (Continued from page 1)



water leaves the sand filters and is held in a 340 cubic metre reservoir from which it is distributed to eight separate animal systems. Each animal system has its own water treatment process.

The 3785 cubic metre Wild Coast pool is the largest and most complex. It is home for several harbor seals, stellar sea lions and two pacific white sided dolphins.

Primary filtered seawater enters the pool at a rate of 225 litres per minute and displaces an equal amount from the pool which is dechlorinated and returned to the ocean. The pool contents are continually filtered and the entire 3785 cubic metres of water is passed through four vacuum diatomaceous earth filters and eight pressure sand filters every 100 minutes. The animals in the pool are mammals and breath air rather than water. Therefore, certain disinfectants can be used in the pool.



Vacuum diatomaceous earth filter



Open bed sand filter



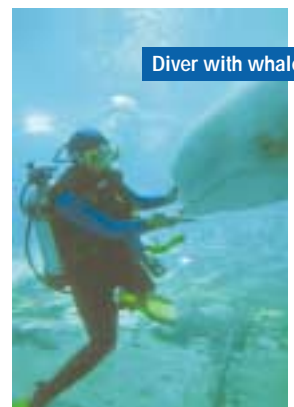
Vacuum diatomaceous earth filter



Sea lion



Beluga whales



Diver with whale



Foam fractionator



Pressure sand filters

Routine on site micro testing is done to confirm the constant free chlorine level of 0.25 mg/litre and the addition of 600 g of ozone per hour is effective in controlling the microbiology in the water. On-line analyzers control diaphragm chemical dosing pumps which feed sodium hypochlorite and hydrochloric acid for pH and chlorine level maintenance.

Some systems consist of a number of smaller fish tanks rather than one large tank as in the previous scenario. In this situation reservoirs of up to 350 cubic metres are included in

the water circuit to increase water volume in the system, and enhance stability of water quality parameters such as pH, dissolved oxygen and temperature.

The fresh water systems operate in the same manner as the salt systems but on a much smaller scale.

Operational automation of equipment and processes is minimal. Critical water quality parameters are monitored by on-line computerized equipment.

—Thanks to Kent Hannestad



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Water Quality Testing

Aqua Zoom Inspection – Manholes & Sewers

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Operator Profile: Kent Hannestad

My association with the Vancouver Aquarium Marine Science Centre began in my teen years when a visit to the Aquarium was a favourite activity. I was a keen aquarium hobbyist and had many fish tanks at home. One difference between me and the average home hobbyist was that I was just as much in love with the filters, pumps, and other water treatment components as I was with the living creatures in my collection.

Through a bit of planning and a lot of luck I started volunteering with the Aquarium's engineering department when I was in grade 12. After graduating from high school I accepted a summer job in the same department. After 12 years working as a plant operator I was promoted to a supervisor/operator position which I held for 8 years. I am currently managing the engineering department which includes the water treatment plant and building mechanical systems and am still very frequently involved in hands on plant operation and system troubleshooting. Over the years I completed many courses that enhanced my ability to maintain and repair electrical and mechanical equipment. I am also certified for Water Treatment Level I and hold a Chlorine Handler certificate.

The Vancouver Aquarium has provided me with a unique working experience that has included all the aspects of operat-



Kent Hannestad

ing and maintaining a Class III water treatment plant. The close exposure to the many special animals and fish that reside in the complex add an extra uniqueness to the job that can not be matched in many other work situations in the world.”

—Kent Hannestad



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Word Games

CHRISTMAS CROSSWORD

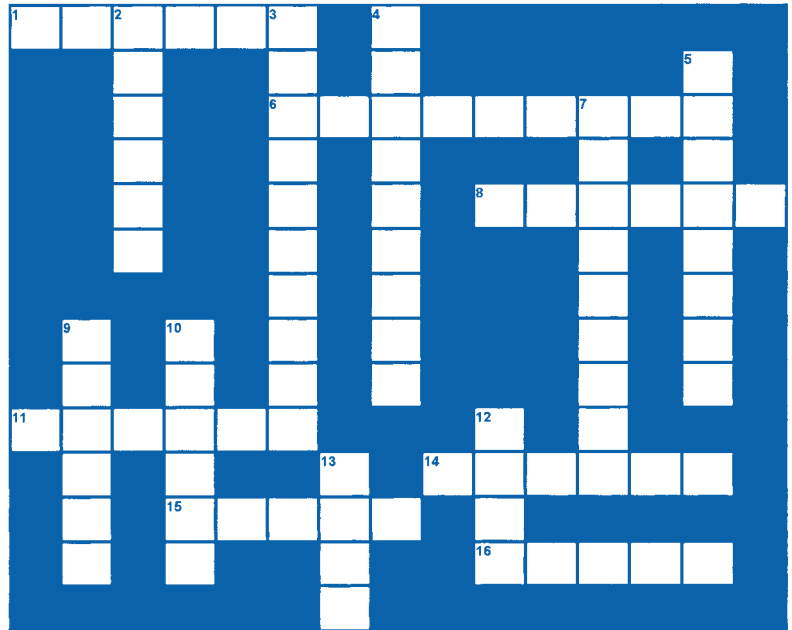
Here is your chance to win an EOCP cap. Mail or fax your completed crossword to the Board Office by Feb. 1, 2002. Fax: 604-847-4794.

Across:

- 1. luminaries
- 6. Santa's home
- 8. where animals feed
- 11. celestial singers
- 14. talking snowman
- 15. presents
- 16. sprites

Down:

- 2. who stole Christmas?
- 3. Saint Nick
- 4. birthday of Jesus
- 5. last month in year
- 7. decorations
- 9. imitation icicles
- 10. vehicle on runners
- 12. evergreen
- 13. heavenly body



WORD GAME ANSWERS FROM LAST ISSUE

Winners for the last issue of the Word Games (B.C. Place Names) were: Cid McLean, City of Penticton WWT Plant; Tom Hankey and Robyn Parker, District of North Cowichan; and Scott Ridley, District of North Vancouver

- | | | | | | |
|------------------------------------|--------------------|------------------------------|-------------------|------------------------------------|---------------------|
| 1. Victoria | 12. Chilliwack | 24. Radium Hot Springs | 34. Aldergrove | 46. Princeton | 56. Barriere |
| 2. Grand Forks | 13. Salmon Arm | 25. Ladysmith | 35. Sandspit | 47. Oliver | 57. Creston |
| 3. Sorrento | 14. Whistler | 26. Fort Steele | 36. Revelstoke | 48. Ocean Falls | 58. Mission |
| 4. Alert | 15. Chase | 27. Desolation Sound | 37. Enderby | 49. Terrace | 59. Yahk |
| 5. Golden | 16. Kitimat | 28. Sicamous | 38. Burnaby | 50. Surrey | 60. Roberts Bank |
| 6. Vancouver | 17. Hope | 29. Courtenay | 39. Armstrong | 51. Boston Bar | 61. Nelson |
| 7. Qualicum | 18. Merritt | 30. Burns Lake | 40. Cache Creek | 52. Horseshoe Bay or Bell Harbour | 62. Vanderhoof |
| 8. Hell's Gate | 19. Campbell River | 31. Nanaimo | 41. Williams Lake | 53. Kamloops | 63. New Westminster |
| 9. Port Hardy | 20. Blue River | 32. Clearwater or Clearbrook | 42. Port Melon | 54. Prince George or Prince Rupert | 64. Field |
| 10. Prince Rupert or Prince George | 21. Long Beach | 33. Barkerville | 43. Fernie | 55. Departure Bay | 65. Abbotsford |
| 11. Lion's Bay | 22. Castlegar | | 44. White Rock | | 66. 100 Mile House |



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Small Water System Operator Profile

Edward Klassen, “Ed” as he is known is no ordinary guy. Born in Paraguay, South America he immigrated to Canada in 1966 at the age of 19. Ed’s parents left Russia many years earlier for Paraguay. His father was a dentist who desired greater opportunity for his large family and decided Canada was the place to go.

Among Ed’s accomplishments are those of a trained machinist, certified auto mechanic and for many years an executive at a large dual franchise automotive dealership. Now 54 years of age, Ed desiring a slower pace of life, cleaner air and more of the outdoors, moved to his summer retreat at Lillooet Lake north of Whistler near Pemberton. Ed says, “I’ve owned lakeshore property at Lillooet Lake since 1977 which prepared my wife Liesbeth and I for the life we would now lead.”

Joining H.J. Developments Ltd., Ed assumed the responsibilities of operating the 152 lot water system. Also he is responsible for a smaller water system serving 14 lots and a 16 kw hydro electric water driven system. H.J. Developments Ltd. wasted little time enrolling Ed with the BCWWA and their training courses. This exposure has qualified Ed to conduct a professional review of the water system he manages and to incorporate long range improvements. A 4-wheel drive Bombardier ATV provides Ed with rapid access to all sites including the



Ed Klassen

5,000 gallon storage tanks and four 1,000 gallon settling tanks. The water intake is right off the mountain requiring frequent monitoring.

Ed received his Small Water System Operator certification this past spring.

—Louis Potvin, H.J. Developments Ltd.



Reservoirs



Water Works Building

NEW MEMBERS AND UPGRADES

Congratulations to the following new operators and those operators who have upgraded their certification level.
June 1–October 31 2001

CERT. NO.	NAME		CITY	CERT. NO.	NAME		CITY
3568	Alexander, Blain	OIT WD	<i>Taylor, BC</i>	1154	Dolphin, Morris	WD II	<i>Aldergrove, BC</i>
3634	Allen, Raymond	OIT WWT	<i>Sparwood, BC</i>	3614	Domino, Clint	WD I	<i>Burnaby, BC</i>
3718	Amaral, Delson	WWC I	<i>Victoria, BC</i>	3697	Donaldson, Jamie	SWS	<i>Trail, BC</i>
1830	Andersen, Randy	WD II	<i>Surrey, BC</i>	3714	Dorman, Donald	WD I	<i>Sidney, BC</i>
3717	Anderson, Michael	OIT WD	<i>Victoria, BC</i>	3722	Doroz, David	WWC I	<i>Victoria, BC</i>
3156	Armistead, Allen	WD I	<i>Prince George, BC</i>	3649	Douglas, Sid	SWS	<i>Rosedale, BC</i>
3705	Bahen, Allan	SWS	<i>Salmon Arm, BC</i>	3613	Drake, Joseph	WD I	<i>Maple Ridge, BC</i>
3576	Balding, David	SWS	<i>Malahat, BC</i>	3629	Droucker, Dominique	WD I	<i>Nelson, BC</i>
3696	Balyk, Terrence	SWS	<i>Nelson, BC</i>	1197	Dube, John	WWC II	<i>Williams Lake, BC</i>
3559	Barber, Terry	WD I	<i>Dawson Creek, BC</i>	3712	Dubois, Richard	SWS	<i>Vernon, BC</i>
3286	Benson, Bruce	MWWT I	<i>Cranbrook, BC</i>	3666	Duchene, Jean-Paul	SWS	<i>Kamloops, BC</i>
3716	Berg, Allan	WD I	<i>Hazelton, BC</i>	3690	Edmondson, Robert A	SWS	<i>Salmon Arm, BC</i>
3556	Berry, Bryan	SWS	<i>Aldergrove, BC</i>	3549	Eisan, Gordon	SWS	<i>Kamloops, BC</i>
1007	Bishop, Bruce	SWS	<i>Cultus Lake, BC</i>	3589	Ellendt, Nelson	WD I	<i>Chilliwack, BC</i>
3627	Blanchard, Bryne	WD I	<i>Marysville, BC</i>	3497	Ellis, Gordon	WWC I	<i>Victoria, BC</i>
3616	Bloski, Marvin	WD I	<i>Kamloops, B.C</i>	3626	Erickson, James	WD I	<i>Lumby, BC</i>
3628	Bogaard, Gilbert	WD I	<i>Nelson, BC</i>	3626	Erickson, James	WWC I	<i>Lumby, BC</i>
3694	Bond, Walt	SWS	<i>Langley, BC</i>	3626	Erickson, James	MWWT I	<i>Lumby, BC</i>
3691	Bothner, Gordon	SWS	<i>Mara, BC</i>	3630	Estby, Forrest	WD I	<i>Edgewater, BC</i>
3615	Bourne, Robert	WD I	<i>Surrey, BC</i>	3650	Fairley, Robert	SWS	<i>Yarrow, BC</i>
3555	Boyd, Ian	SWS	<i>100 Mile House, BC</i>	3651	Fitzgerald, James	SWS	<i>Chilliwack, BC</i>
3625	Brousseau, Robert	SWS	<i>Chilliwack, BC</i>	3624	Fredin, Leslie	SWS	<i>Fort St. John, BC</i>
3554	Brown, Jim	SWS	<i>Lytton, BC</i>	3619	Friess, Larry	SWS	<i>Prince George, BC</i>
833	Bruce, Robert	MWWT I	<i>Saturna Island, BC</i>	3012	Fry, Scott	MWWT III	<i>Richmond, BC</i>
3647	Burgess, Albert	SWS	<i>Langley, BC</i>	3612	Gaine, Cliff	WD I	<i>Coquitlam, BC</i>
3597	Busto, Antonio	OIT WD	<i>Burnaby, BC</i>	3652	Ganzeveld, Troy	SWS	<i>Chilliwack, BC</i>
3575	Cassels, Patrick	SWS	<i>Malahat, BC</i>	1123	Gardner, Ian	SWS	<i>Agassiz, BC</i>
3719	Cassie, John	WWC I	<i>Victoria, BC</i>	3085	Gatt, Ray	WWC I	<i>Powell River, BC</i>
3706	Chapman, L.B.	SWS	<i>Vernon, BC</i>	3653	Grimm, Johnny	SWS	<i>Boston Bar, BC</i>
3574	Chislett, Robert	SWS	<i>Parksville, BC</i>	3385	Guzy, Walter	MWWT I	<i>Vernon, BC</i>
3138	Chomolok, Steve	SWWS-M	<i>Errington, BC</i>	3126	Halldorson, Arnie	WWC II	<i>Delta, BC</i>
3138	Chomolok, Steve	SWS	<i>Errington, BC</i>	3490	Hamer, Beverly	WD I	<i>Victoria, BC</i>
3720	Clunk, Andrew	WWC I	<i>Victoria, BC</i>	3434	Hand, John	WD II	<i>Langley, BC</i>
3713	Colgate, George	SWS	<i>Nemiah Valley, BC</i>	3583	Handler, John	WD I	<i>Prince George, BC</i>
3648	Costello, Andrew	SWS	<i>Lake Erroch, BC</i>	3654	Hanks, Graham	SWS	<i>Abbotsford, BC</i>
3644	Crawford, Alexander	SWS	<i>Terrace, BC</i>	3692	Hanna, Keith	SWS	<i>Salmon Arm, BC</i>
3319	Crowley, Paul	MWWT I	<i>Cobble Hill, BC</i>	3643	Haverland, Lyle	SWS	<i>Houston, BC</i>
3000	Cruz, Bayani	IWWT III	<i>Prince George, BC</i>	3642	Hayden, Jason	SWS	<i>Terrace, BC</i>
3721	D'Argis, Ian	WWC I	<i>Victoria, BC</i>	3560	Hemstalk, Daniel	WD I	<i>Sechelt, BC</i>
3707	Davenport, Leslie	SWS	<i>Kelowna, BC</i>	3553	Hendy, Wayne	SWS	<i>Williams Lake, BC</i>
3708	Davis, Gordon	SWS	<i>Revelstoke, BC</i>	3433	Heska, Grant	WD II	<i>Surrey, BC</i>
3635	Deacon, Fred	OIT WWT	<i>Windermere, BC</i>	3698	Hetman, Nicholas	SWS	<i>Castlegar, BC</i>
3514	Dennis, Reuben	WT I	<i>Port Simpson, BC</i>	3645	Hidber, Joseph	SWS	<i>Telkwa, BC</i>
3585	Dhami, Randheir	OIT WWT	<i>Duncan, BC</i>	3552	Hiebert, Greg	SWS	<i>Horsefly, BC</i>
3601	Diachuk, Brad	WWC I	<i>Port Coquitlam, BC</i>	3573	Hieronymi, Frank	SWS	<i>Bowser, BC</i>
3671	Dickinson, Allen	SWS	<i>Spences Bridge, BC</i>	3689	Hill, Brian	SWS	<i>Eagle Bay, BC</i>
3617	Dilts, Robert	SWS	<i>Dawson Creek, BC</i>	3600	Hoce, Mike	WWC I	<i>Maple Ridge, BC</i>

Continued...

NEW MEMBERS AND UPGRADES (Continued)

CERT. NO.	NAME		CITY	CERT. NO.	NAME		CITY
3586	Holtom, Malcolm	OIT WWT	Nanaimo, BC	2046	Scriven, Richard	MWWT I	Taylor, BC
3595	Howard, Jr., Richard	WT I	South Hazelton, BC	3425	Shaheem, Zahid	WD II	Surrey, BC
3709	Hughes, John	SWS	Tappen, BC	3727	Shaw, Kevin	WWC I	Invermere, BC
3572	Jensen, Arne	SWS	Ucluelet, BC	1781	Shields, Robert	WD III	Richmond, BC
3620	Johansen, Marion	SWS	Fort St. John, BC	3343	Silva, Ethige	SWS	Chilliwack, BC
3087	Jones, Brian	WWC I	Langley, BC	3091	Simmons, Jerry	SWS	Slocan, BC
3611	Jorgensen, Bruce	WD I	Maple Ridge, BC	3669	Simon, Carl	SWS	Savona, BC
3164	Keiver, Kenneth	MWWT I	Cranbrook, BC	3670	Simpson, Bob	SWS	Kamloops, BC
3641	Nugent, Edward	SWS	Smithers, BC	3646	Sivertson, Robert	SWS	Dease Lake, BC
1703	Nuttall, Steven	SWS	Agassiz, BC	1572	Skinner, Kenneth	WD I	Saanichton, BC
3140	Oakey, Steven	WWC II	North Vancouver, BC	3501	Smith, Ivan	WD I	New Westminster, BC
3667	O'Conner, James	SWS	Kamloops, BC	3729	Smith, Shane	OIT WWC	Victoria, BC
2060	Oliver, Kenn	MWWT III	Port Hardy, BC	3550	Smith, William	SWS	Williams Lake, BC
3660	Oosterhof, William	SWS	Chilliwack, BC	3685	Sonntag, Holger	SWS	Sorrento, BC
3730	Oscarson, David	WD I	Kimberley, BC	3674	Speed, Terry	SWS	Celista, BC
3668	Ostrander, Heath	SWS	Lillooet, BC	3152	Stern, Christopher	WD II	Prince George, BC
1252	Palmer, Timothy	MWWT III	Trail, BC	3703	Sullivan, David	SWS	Castlegar, BC
782	Pardell, Dennis	SWS	Spallumcheen, BC	3704	Sutherland, David	SWS	Rock Creek, BC
3715	Peeke-Vout, George	WD I	Victoria, BC	3684	Taber, Jason	SWS	Armstrong, BC
3590	Peters, Alan	WD I	Dawson Creek, BC	3604	Tartaglia, Ron	WD I	Port Coquitlam, BC
3588	Piguet, Kevin	WWC I	Surrey, BC	3638	Thesen, Melvin	MWWT I	Invermere, BC
777	Pitney, Gerry	WD II	Agassiz, BC	3461	Tonelli, Montgomery	SWS	Lytton, BC
3686	Potter, Kevin	SWS	Salmon Arm, BC	3683	Townsend, Dale	SWS	Salmon Arm, BC
3661	Pottrick, Frank	SWS	Abbotsford, BC	3578	Treloar, Graham	SWS	Victoria, BC
3427	Prasad, Jai	WD II	Surrey, BC	3728	Turnbull, Mike	WWC I	Victoria, BC
3701	Proulx, Richard	SWS	Trail, BC	3682	Van Essen, Martin	SWS	Vernon, BC
3582	Proulx, Sandy	SWS	Quesnel, BC	3569	Vanjoff, Lee	OIT WWT	Grand Forks, BC
3640	Radawetz, Kevin	SWS	Smithers, BC	3579	Vercleyen, Marc	SWS	Fanny Bay, BC
1943	Raincock, Grant	MWWT III	Richmond, BC	3662	Vickers, Frederick	SWS	Abbotsford, BC
3577	Reichert, James	SWS	Cowichan Bay, BC	3594	Videto, Kyle	WD I	Cranbrook, BC
3673	Reimer, Robert	SWS	Seymour Arm, BC	3594	Videto, Kyle	MWWT I	Cranbrook, BC
3678	Retasket, Eddy	SWS	Cache Creek, BC	1942	Villanueva, Arvel	WT I	Vancouver, BC
3702	Retzlaff, Rodney	SWS	Castlegar, BC	958	Vurzinger, Joe	WD I	Rosedale, BC
3605	Richardson, Gordon	WD I	Surrey, BC	3675	Wagner, Michael	SWS	Kamloops, BC
3592	Ridley, Colin	SWS	Hartley Bay, BC	3580	Walker, Gordon	SWS	Qualicum Beach, BC
1045	Riley, Christopher	WD II	Abbotsford, BC	3663	Walker, Terry	SWS	Abbotsford, BC
3566	Robertson, Darren	OIT WD	Moberly Lake, BC	3591	Welsh, Mitchell	WD I	Dawson Creek, BC
3566	Robertson, Darren	SWS	Moberly Lake, BC	3587	Welz, David	OIT WD	Parksville, BC
3621	Rowe, Ernest	SWS	Chetwynd, BC	3664	Whitlam, Richard	SWS	Lindell Beach, BC
3726	Roy, Raymond	WWC I	Cobble Hill, BC	3676	Wied, Arnold	SWS	Valemount, BC
3558	Rukasz, Roman	MWWT I	Langley, BC	3677	Wied, Colin	SWS	Valemount, BC
3622	Russell, David	SWS	Dawson Creek, BC	3680	Wiggins, Lee	SWS	Heffley Creek, BC
1153	Salsbury, Scott	SWS	Abbotsford, BC	3565	Williams, John	WD I	Sechelt, BC
3596	Sam, Kenny	OIT WT	Fort St. James, BC	3581	Wilson, William	SWS	Fanny Bay, BC
3632	Sam, Nick	WD I	Invermere, BC	3665	Woodall, Bill	SWS	Lindell Beach, BC
3633	Sarabun, Roy	WD I	Fernie, BC	3623	Woodruff, James	SWS	Dawson Creek, BC
3602	Schneider, Harvey	MWWT I	Richmond, BC	3681	Worthington, James	SWS	Sorrento, BC
3557	Schwemler, David	SWS	Wells, BC	3679	Zust, Andy	SWS	Salmon Arm, BC
1913	Sciarretta, Paolo	WD II	Burnaby, BC				

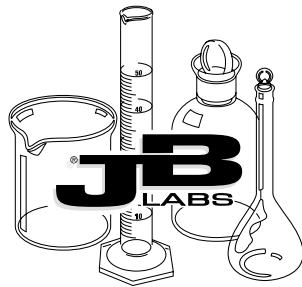
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UPCOMING EVENTS

BCWWA Calendar 2002

<p>Penticton January 28 – February 1 Chlorine Handling</p> <p>Invermere February 6 – 7 Small Water Systems</p> <p>Cranbrook February 4 – 5 Small Water Systems</p> <p>Victoria February 18 – 22 Water Distribution Level II February 18 – 22 Wastewater Collection Level II February 18 – 22 Cross Connection Control February 18 – 19 Small Water Systems February 21 Valves & Actuators February 22 Water Meter Selection, O & M</p> <p>Bowen Island February 13 – 14 Small Water Systems</p>	<p>Kamloops March 11 – 15 Environmental Lab Procedures</p> <p>April 8 – 12 Water Treatment Level I April 8 – 12 Water Distribution Level II April 8 – 12 Wastewater Collection Level II April 8 – 12 Wastewater Treatment Level I April 8 – 12 Pump Maintenance April 8 – 12 Confined Space</p> <p>Vancouver May 2002 UBC Operator Symposium and Tradeshow</p> <p>Dawson Creek June 2002 Dawson Creek Workshops</p>
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Please phone BCWWA @ 604 540-0111 for information on the above courses or check their website at www.bcwwa.org.

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Operators wishing to write certification exams must apply to the EOCP by written application complete with job description no later than two weeks prior to the exam session. Exam fees are payable to the EOCP office before the time of writing and may be paid by visa.

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