



# BRITISH COLUMBIA OPERATORS DIGEST

A NEWSLETTER FOR WATER  
AND WASTEWATER OPERATORS

JULY 2005 • NUMBER 111

## EOCP Business Plan

**T**he EOCP Board reviewed a draft Business Plan at the EOCP Board Meeting on April 25, 2005. The draft Business Plan had been formulated over the previous six months and was completed by EOCP Directors and staff. The need for a formal Business Plan arose with the dramatic increase in water system operators and facility classifications over the past two years due to the introduction of mandatory certification in water supply systems as designated in the provincial Drinking Water Protection Regulations.

With the large increase in certified water system operators, the EOCP Board reviewed its options to provide necessary services at reasonable costs to operators and facility owners. The provincial Ministry of Health Services provided the EOCP with a grant of \$336,000 to cover the EOCP's extra costs in implementing the mandatory certification of water operators and facility classification along with a number of interrelated activities. This allowed the Board to postpone increases in operator dues and other fees for 2005.

The Business Plan identifies twenty-five tasks that the EOCP will undertake over the next two years. Each task is planned with a budget, time frame and who will complete the task (EOCP staff, Directors or contractors). Some



**2005 EOCP BOARD OF DIRECTORS** From left to right: Scott Fry, Bernie Taekema, Eric Jackson, Don Gare, Leo Albrecht, Pat Miller, Joe McGowan, Bob Smith, Mike Gosselin.

tasks are presently underway. The Board plans to formally adopt the Business Plan at the October 2005 Board Meeting, after which the Business Plan will be accessible on the EOCP website.

### Identified Tasks for the EOCP over the next two years

1. **Invigilation Procedure** – to develop standard procedures for the invigilation of all EOCP exams
2. **Advisory Committee** – involve non-Board individuals to obtain input from industry regarding the EOCP
3. **Annual Report** – to provide an annual summary of the program's finances and activities to funding agencies and operators

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## Environmental Operators Certification Program

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The Environmental Operators Certification Program is a charter member of the Association of Boards of Certification, and is a Registered Society with over 3,000 active members.

### 2005/2006 BOARD OF DIRECTORS

**Joe McGowan** – Chairman  
**Leo Albrecht** – CEU Assessment  
**Don Gare** – Secretary, Newsletter  
**Eric Jackson** – Treasurer  
**Bob Smith** – Education  
**Mike Gosselin** – Facilities Classification  
**Scott Fry** – Director  
**Pat Miller** – Director

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## Award Presentations

At the April EOCB Board Meeting, EOCB Chairman Joe McGowan (left in photo) presented retiring Director Bernie Taekema with a plaque in appreciation of his 15 years of service and contribution to the program.

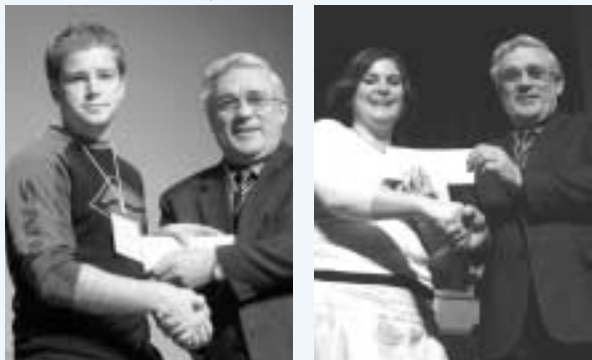


Some of Bernie's many contributions to the Board included developing facility classification templates, classifying many facilities over the years as well as serving as Board Secretary. Bernie has assisted the Board through tremendous growth and changes to the program including mandatory certification requirements in wastewater treatment, and water treatment and supply. He has proctored hundreds of certification exams and continues to do so.

Bernie was raised in Smithers and attended college in Iowa. After graduation he returned to Smithers and began work with the Pollution Prevention Section of the provincial Ministry of Environment. Bernie was elected to the EOCB Board in 1989, and in 1991 he moved to Nanaimo with his wife Joyce and children Nathan, Stephanie and Ellen. He works for the Ministry of Environment as an aquaculture biologist.

With some new found spare time, Bernie plans to spend more of that time with his family and improve his ice hockey skills!

## EOCP Bursary Awards



In April, Board Director Eric Jackson presented two EOCB bursary awards of \$500 each to Dillon Bucknell (left) and Deana Connelly (right), both students entering their second year in the Water Quality Technology Program at Kelowna's Okanagan University College.

## 2005 BCWWA Victor M. Terry Award OPERATOR OF THE YEAR – Sandy MacKenzie

**T**he Vic Terry Award is a BC Water and Waste Association award that recognizes an operator who has demonstrated ingenuity and proficiency in plant operation or maintenance. The Environmental Operators Certification Program makes nominations for the award. This year's award was presented to Sandy MacKenzie at the BCWWA Annual Conference held in Penticton in April.

Sandy MacKenzie started her career in wastewater treatment in Nanaimo, B.C., graduating from the Water & Wastewater Treatment Operator Program at Malaspina College in 1985.

She was employed by the Engineering Department of the City of Calgary from 1985 to 1987, working as a Plant Operator I at the Fish Creek Sewage Treatment Plant. She was certified as a Level I WWT Operator 1986.

Sandy moved to Vancouver Island and worked as a Wastewater/Waterworks Operator I from 1988 to 1990 for the Capital Regional District in Victoria. She passed her WWT Level II exam in 1988 and her WD Level I exam in 1990. From 1990 to 1993, Sandy worked as a WWT Level II Operator at Annacis Island WWT Plant. In 1995 she moved to Kelowna and worked at the Kelowna Pollution Control Centre as a WWT Level II Operator. In 1997, Sandy and her family moved to the Town of Leamington, Ontario where Sandy was employed as a Level III WWT Operator.

**"In February 2000, she was promoted to a supervisor level at Lulu Island and since moving to this position has been a positive influence."**

Sandy obtained her Level III WWT certification in February 1998 and returned to B.C. to take a job at the GVRD Lulu Island WWT Plant. She passed her WWT-IV exam in June, 1999 becoming the first female operator in B.C. to obtain Level IV certification! Sandra has one daughter, Caitlyn.

With her return to the GVRD in 1998 Sandy's aptitude and common sense approach to operations resulted in an easier transition during the secondary upgrade at Lulu Island. In February 2000 she was promoted to a supervisor level at Lulu Island and since moving to this position has been a positive influence.

Sandy became the Plant Operations Supervisor at a critical time for the Lulu Island plant. The new upgrade had just been completed and Al East the plant manager was retiring. When a



BCWWA President Don Degan and EOCP Chairman Joe McGowan presenting the Vic Terry Award to Sandy MacKenzie at the BCWWA Conference in Penticton.

complete change over from a primary to a secondary plant takes place the learning curve and stress on plant staff is very high. Sandy managed to guide everyone through that time balancing all the diverse egos with great tact and understanding. She also took over for the plant manager on an interim basis until the new plant manager was selected.

Sandy's style is the best of what a modern manager should be. Her dedication to her work and genuine concern that her staff are safe and given all the tools they need to do their work has made for a positive work environment where staff constantly go beyond their job descriptions. In all matters of work, dealing with managers and staff, Sandy's integrity is beyond question.

In the past few years a big push has come forward from GVRD to coordinate safety and training corporate wide. Sandy has risen to the challenge and during 2003 and 2004 slogged through lockout changes, hazard identification and risk assessments revisions, to name a few. The past year Sandy continued to upgrade her own operations knowledge by attending a week long bacteria recognition course in Oregon. This has helped her and the plant staff to keep the Lulu Island plant running smoothly. Sandy is also called on to assess new equipment and maintenance schedule changes to provide the least impact to the process. Sandy is an all around asset to the GVRD and continues to provide leadership and mentoring to staff.

# BOARD BUSINESS BRIEFS

**Annual General Meeting – May 2, 2005 at Langara College, Vancouver**  
 Directors present: Eric Jackson, and Executive Director Bill Hyslop and approximately 150 operators.

Director Eric Jackson gave the Chairman’s Report due to the Chairman’s absence.

The EOCP is growing at a rapid pace with over 3,000 active members holding 4,600 certificates. In 2004 the EOCP moved to a larger office and hired an Executive Director as well as one more office assistant making a total of four paid staff.

The CEU requirement for operators has been extended an additional year to January 1, 2008. Operators holding Level I – IV certification will require 24 hours (2.4 CEUs) of related education by January 1, 2008 and each two year period thereafter. Operators holding Small system certification will require 12 hours (1.2) CEUs in the same time periods.

**Treasurer’s Report:**

The Ministry of Health Services provided a grant of \$336,000 to the EOCP to cover extra costs in implementing mandatory certification and classification of water operators and facilities and a number of interrelated activities. The table below includes the grant money.

Cash and Chequing Accounts	\$ 80,777
ING Direct	\$ 438,524
<u>Investments</u>	<u>\$ 10,531</u>
<b>Total Assets</b>	<b>\$ 529,832</b>

**Election Results: 2005/2006 Board of Directors**

There were 288 ballots received. All positions elected for a 2-year period. Joe McGowan and Eric Jackson remain in their positions by acclamation. Mike Gosselin (196 votes, elected); Don Gare (186 votes, elected); Doug Brereton (130 votes, not elected).

**Mandatory Certification –** As of January 2006, Class III water facilities must have at least one Level III operator. A relief operator may be a Level II.

**Strategic Planning Meeting – April 25, 2005, Burnaby**

Directors present: Joe McGowan (Chair), Pat Miller, Scott Fry, Eric Jackson, Don Gare, Mike Gosselin, Leo Albrecht, Bernie Taekema, Bob Smith and Executive Director Bill Hyslop.

The Board and staff reviewed and approved the Draft EOCP Business Plan, with the twenty-five identified tasks. As part of the Business Plan, the Board reviewed six different financial options in order to provide revenues for the planned expenditures for the Program for upcoming years. The option chosen by the Board which will be approved at the Board fall meeting:

- The concept that facilities would bear most of the program costs with operators sharing some of the increased costs.
- WWT facility classification fees would remain the same (\$25 to \$1,600/year)
- WD and WT facility classification fees would be modeled after the WWT facility classification fees
- Annual operator dues – \$50
- Certification exam fees – \$100, Small System exam fees – \$50

**Board Meeting – April 25 & 26, 2005, Burnaby**

Directors present: Joe McGowan (Chair), Pat Miller, Scott Fry, Eric Jackson, Don Gare, Mike Gosselin, Leo Albrecht, Bernie Taekema, Bob Smith and Executive Director Bill Hyslop.

**Chairman’s Report – Joe McGowan**

The Chairman stated that the number one goal of the Board is to finalize the EOCP Business Plan (financial plan). Once approved, the Chairman will meet with MOHS in Victoria and also pursue a Memorandum of Understanding with MWLAP.

Mike Gosselin reported on the continued large number of facilities requiring classification. He has classified 203 facilities in the past 6 months.

Don Gare told the Board that the next Digest will be published in June. He also mentioned that the web page is averaging over 100 visits/day, with job opportunities and certification and exam information the most visited pages.

Executive Director Bill Hyslop has nearly completed the Yukon water haulers exam. He recently met with Thompson Rivers University in Kamloops that has initiated a Water Treatment Technology two-year distance education program. Bill will also be giving an EOCP presentation to the Gulf Island Water Association on Mayne Island.

The Board moved that the EOCP declines allowing Small Water System applicants to write certification exams without applying in advance. The EOCP must review applicant’s qualifications to write before the exam session.

The Board moved that active lifetime members must maintain full CEU requirements for renewal as other active operators.

The Board also approved to continue to support EOCP participation in the BCWWA Conference Top Ops Competition and to take on a larger role in the future.

# BCWWA CONFERENCE TOP OPS & PUMP TEARDOWN COMPETITIONS

**A**nother successful Top Ops and Pump Teardown competition was held in Penticton on April 18th in conjunction with BCWWA's annual general meeting. The five competing teams in the Top Ops were GVRD, Chilliwack, INAC, Penticton and Surrey. The competition was extremely competitive with the home team from Penticton winning on the final question. A highly spirited team entered by INAC was new to the competition and held their own in having fun and answering questions against the more experi-

enced teams from municipalities. Shawn Sanders was the moderator. Judges were EOCP Directors – Bob Smith and Pat Miller and EOCP Executive Director – Bill Hyslop.

The Pump Teardown competition had seven teams entered – Surrey, Chilliwack, Delta, Coquitlam, GVRD, Burnaby and Langley. The GVRD took home first place after another very close competition. The Pump Teardown competition was organized by Nelson Porter.



Pump Teardown Competition



Tops Ops Competition



1st Top Ops – City of Penticton  
Dave Evanchu, Cid McLean, Karen Moore



2nd Top Ops – City of Chilliwack  
Gord Campbell, Barry Kennedy, Sandy Hamilton



3rd Top Ops – City of Surrey  
Dave Manaigre, John Campbell, Henry Fader



1st – Pump Teardown – GVRD  
Dan Deacon, Scott Hayton, Ivan Kozljan



2nd - Pump Teardown – City of Surrey  
Henry Fader, John Campbell, Dave Manaigre



3rd Pump Teardown – City of Chilliwack  
John Silva, Barry Kennedy, Sandy Hamilton

# Plant Profile: Lulu Island Wastewater Treatment Facility



**T**he Greater Vancouver Regional District owns and operates 5 WWTP's in the lower mainland including Lulu Island, Annacis Island, Iona Island, Lions Gate and Northwest Langley plants. Two of the facilities are primary plants and 3 are secondary plants, the 5 plants combined treat on average 1230 ML per day.

The Lulu Island plant is now one of the leaders in British Columbia in the area of wastewater treatment. The plant has evolved from its primary beginnings in the early 70's through various upgrades to its present secondary configuration. Lulu's original primary treatment was upgraded in 1999 to a secondary system by the addition of a Tricking Filter/Solids Contact process.



### PLANT PROFILE:

- Flow capacity is 155 MLD
- Average flow for 2004 was 79 MLD
- Current population served is 170,000
- 2004 average influent and effluent values:

	Influent	Effluent	Permit
cBOD mg/l	218 mg/L	6 mg/L	45 mg/L
TSS mg/l	206 mg/L	7 mg/L	45 mg/L

### TREATMENT PROCESS:

#### Pre-treatment:

Raw sewage entering the Lulu Island WWTP first gets screened by three vertical bar screens. The screens can handle 1000 L/s

and remove material larger than 12.5 mm. The influent is then pumped up to the six pre-aeration tanks. Grit is removed here with the use of compressed air. The screened material goes to the Burnaby Incinerator and the grit goes to an approved land-fill.

#### Primary Treatment:

70% of TSS and 33% of cBOD is removed in the Primary Sedimentation tanks. The three rectangular tanks have a capacity of 2.5 ML each and remove sludge and scum with a continuous chain and flight system. Scum is screened and sent to the Burnaby Incinerator along with the screened primary sludge residuals. Primary Effluent, PE, leaves the tank through submerged launderers. The launderers help keep scum from entering the TF/SC process.



Clarifiers and Trickling Filters



Trickling Filter Pumps

**TF/SC Process:**

The first step in the secondary process is the trickling filters. PE is pumped to the top of the trickling filter and is distributed over the plastic media. The process uses a single pass, no recirculation method. The filters are the work horse of this process, with 87% of the soluble carbonaceous Biochemical Oxygen Demand, scBOD, being removed.

The next step is the SC or solids contact. The SC process converts Trickling Filter Effluent, (TFE), carbonaceous Biochemical Oxygen Demand (cBOD) to Suspended Solids, (SS), oxidizes TFE cBOD and flocculates the finely divided TFE SS. Return Secondary Sludge (RSS) is mixed with the TFE to maintain a sufficient concentration of activated sludge in the solids contact tanks. The mixing of these two streams in the contact tanks improves the settling characteristics of the SS in the resulting mixed liquor.

The last step is secondary clarification. The three, 4.2 ML round clarifiers separate the solids in the MLSS. The effluent leaves the clarifiers and proceeds to disinfection. The solids are

vacuumed off of the bottom of the tank to be returned to mix with the TFE. The return SS is ~ 5000 mg/L.

**Sludge Thickening and Digestion:**

The sludge collected from the bottom of the sedimentation tanks is fed to a gravity thickener where solids are increased from less than 1% to 5% solids. Waste secondary solids, WSS, is sent to 1 of 2 Diffused Air Flotation Tanks for thickening. The DAFT's increase the WSS from less than 0.20 % to 4.5 % solids. These two thickened sludge streams are mixed and then fed to the digesters.

Lulu Island utilizes a unique three dimple bottomed anaerobic digester design. This design, along with multiple feed and gas mixing points, assures a very well mixed digester with very little deposition on the digester floor. The methane gas produced from the mesophilic process (38°C) is compressed and used for mixing the digester. Excess gas is burned in two low pressure hot water boilers or flared if not needed. The hot water is used to heat the buildings, the digesters and other plant processes.



Solids Contact Tanks



Humbolt Centrifuges



**De-watering:**

After 32 days retention time in the digesters(present average), the digested sludge has been reduced from ~ 4.0 % solids to ~ 1.7 % solids. The digested sludge is then fed to centrifuges where the solids are further thickened to ~ 25 %. The de-watered solids are trucked to various sites around BC for land rehabilitation. During 2004, Lulu Island WWTP produced 7407 metric tonnes of biosolids with most of this going to mine reclamation.

**Odour Control Systems:**

Odorous air is collected from several points around the plant and is sent to four mixed media biofilters. Areas of concern are solids handling facilities and TF air. In the recent up-grade, equipment hoods and tank covers were incorporated into the design to reduce odours. The Lulu Island WWTP received no odour complaints for the year of 2004.

**Disinfection and De-chlorination:**

Final effluent is disinfected using a 12% sodium hypochlorite solution and de-chlorinated using sulphur dioxide gas. In 2005, the SO2 gaseous system will be replaced by a new liquid sodium bisulphite system.

**PLANT STAFFING:**

At the present time the plant is operated using 3 administration personnel, 7 maintenance and 7 operations personnel, working an 8 hour shift each day. 6 operators work a split shift, Sunday to Thursday or Tuesday to Saturday, with all other staff working a regular Monday to Friday shift. The original secondary upgrade plan called for staffing on a 24/7 basis using four shifts. By undertaking an extensive plant review using program de-bugging and optimizing process automation has resulted in lowering staff needs to the present level.

**AUTOMATION AND CONTROL:**

The automation degree using a control systems throughout the GVRD plants is extensive. Virtually all devices and machines are connected to, and controlled by this system. The entire electrical distribution system is monitored and controlled to such a high degree that the plants will automatically recover after a power failure. The system is comprised of 58 plant operator computers that act as an interface between the operator and the plant floor. More than 150 computer processors are distributed through out the plants, which contain the logic that makes the plant run. Data acquisition is a key element of this control system. It is through the analysis of this data that plant operations and maintenance staff have applied automation to reduce annual costs by more than a million dollars each and every year.

—Thanks to  
*John Tailford*





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# EOCP CLASSIFICATIONS & CERTIFICATIONS

There are over 1,000 facilities classified by the EOCP with just over 3,000 active operators holding 4,300 certificates.

## FACILITIES

	I	II	III	IV	Total
WD	86	96	38	34	254
WT	7	29	15	12	63
WWC	39	53	10	16	118
MWWT	135	76	30	16	257
IWWT	0	2	1	1	4
SWWS	40				40
SWS	256				256

- WD - Water Distribution
- WT - Water Treatment
- WWC - Wastewater Collection
- MWWT - Municipal Wastewater Treatment
- IWWT - Industrial Wastewater Treatment
- SWWS - Small Wastewater System
- SWS - Small Water System

## OPERATORS

	I	II	III	IV	Other	Total
WD	770	520	83	5		1378
WT	128	43	5	6		182
WWC	456	244	18	1		719
MWWT	247	162	126	44		579
IWWT	7	5	2	0		14
SWWS					86	86
SWS					846	846
CH					33	33
IS					5	5
OIT					126	126

- CH - Chlorine Handler
- IS - Independent System
- OIT - Operator in Training



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# OPERATOR PROFILE – Dave Hoffman

**D**ave graduated in Nanaimo from the Malaspina College wastewater operator course in 1985 and went to work for the GVRD at the Lions Gate WWTP. Dave continued to upgrade his knowledge and skills, achieving his goal of Level IV MWWTP certification. In 1990, discussions were held to determine if thermophilic operation could be achieved and sustained at the Lions Gate plant. Thermophilic digestion was in its infancy and many months of trial and effort were needed to achieve proper operation and stabilization. In 1996, Dave along with 2 others, co-wrote a paper on this process for presentation at the BCWWA conference. Since that time this information has found its way to many other professionals in the wastewater field including international personnel. Dave's dedication to his job and his ability to teach others, had made him a prime candidate to move to higher things. Talk of secondary upgrades were in the air so in 1997, he made the move to Lulu Island as the plant operations foreman.

**"Dave continued to lead staff in fine tuning the process in all areas such as process control, automation, reduction of electrical costs, reduction of chemical costs and sludge hauling."**

Upon arriving at Lulu Island in 1997, Dave not only was tasked with overseeing the operation of the current Primary plant and crew, he spent endless hours preparing for the secondary upgrade by studying engineering design descriptions and drawings, enabling him to provide critical operational input. His focus was to ensure that upon completion, Lulu could be operated and maintained as a new plant should be. He was the operational point person in coordinating and accommodating all construction tie-ins for the new plant. Due to his expertise and diligence throughout the project, secondary treatment



commenced in January 1999 and Lulu was complying with its 45/45 permit within 48 hrs. Once we were on line, Dave continued to lead staff in fine tuning the process in all areas such as process control, automation, reduction of electrical costs, reduction of chemical costs, and sludge hauling. Due to the joint efforts of Dave and his co-workers, hundreds of thousands of dollars in savings were realized for the GVRD. He also completed a filament identification course given by Dr. Michael Richards in 2003, which he consistently uses to fine tune and control the secondary biological process, providing process stability and keeping Lulu well below its discharge permit limits. Dave reads voraciously and keeps abreast of the changing technology in our field. He constantly challenges operations, engineering and management staff and pushes them to examine and defend their decisions. He never hesitates to share his information with his peers.

Dave's commitment to excellence and dedication to his work contribute greatly to the success of the Lulu Wastewater Treatment Plant.

## PROJECT NEWS

### KAMLOOPS WATER TREATMENT CENTRE

The City of Kamloops had the official opening of the new Water Treatment Centre in February. The \$48.5 million project was designed by Stantec Consulting Ltd., and Urban Systems Ltd. Zenon Environmental Inc., supplied the membranes and associated equipment.

The membrane filtration system is modular and cost effective in that the filters are maintained in cassettes that can be individually replaced when necessary or added to accommodate growth. Initially there are 90 cassettes that can treat up to 160 ML/day with the capacity expandable to 200 ML/day in future.

The membrane treatment process serves as an absolute barrier to water-borne parasites such as giardia and cryptosporidium. The system is designed to process 99 per cent of river water entering the facility, with the 1 per cent reject water centrifuged to separate solids before the remaining water is used primarily for irrigation.

### FVRD NORRISH CREEK WATER TREATMENT PLANT

The Fraser Valley Regional District's official opening of the new Norrish Creek Water Treatment Plant was June 11. The Norrish Creek plant uses both slow sand filtration and membrane filtration to treat water which supplies 130,000 residents in

the City of Abbotsford and the District of Mission with drinking water.

The \$24.7 million project was designed by Dayton and Knight Ltd., and built over two stages. The slow sand filter system was completed in 2002 and the membrane filtration system has been operational since early May. The membrane filtration system operates in parallel with the slow sand filtration system due to the fluctuation in seasonal water quality. The system can handle up to 117 ML/day.

### WESTBANK IRRIGATION DISTRICT POWERS CREEK WATER TREATMENT PLANT

The Westbank Irrigation District (WID) supplies water to approximately 12,000 residents of Westbank, which is west of Kelowna across Okanagan Lake. As well, the WID provides irrigation water for over 950 acres of farmland. The WIC is presently having Earth Tech (Canada) Ltd. complete the detailed engineering for a new water treatment plant.

The water treatment plant is being designed with coagulation, clarification and filtration using dissolved air flotation (DAF) clarification and rapid filtration in the same concrete cell. Maximum design capacity is 54 ML/day. The water treatment plant is scheduled to be operational by the spring in 2007.

### EOCP Business Plan – Identified Tasks for the EOCP over the next two years *(continued from page 1)*

4. **CEU Implementation** – to review the CEU procedures and ensure all operators are aware of the regulations
5. **Participation in Development of Canadian Exams** – to assist in developing Canadian exams reflective of Canadian technology and content
6. **Code of Ethics** – to develop a Code of Ethics with standards that operators must abide by
7. **Appeal Procedures** – appeal procedure for operators regarding a code of ethics
8. **Staffing Requirements/Succession Planning** – to develop policy for Board and staff continuity and expansion
9. **DWIMP (Drinking Water Information Management Program)** – upgrade computer system and provide access to MOHS and MWLAP staff to check facility classification and operator certification as well as operators to access their file information
10. **Upgrade BC Exams** – produce new Canadian exams
11. **Expand Digest** – to expand the EOCP newsletter with more issues and out source the preparation
12. **Facilities Classification Template** – to update and publish templates
13. **Website Upgrade** – to improve and increase content and allow interactive capabilities
14. **Database Upgrade** – increase capability of existing 1992 database to improve efficiency and provide external access
15. **Communication Plan** – to communicate to all stakeholders legislation requirements and the EOCP role and responsibilities including printed information and information meetings throughout the province
16. **Policy Manual** – record EOCP operating policies and procedures to ensure consistency
17. **MWLAP Operations Specialists** – develop the Operations Specialist category
18. **Yukon Bulk Water Haulers** – develop new category and exam
19. **Business Plan** – develop a Business Plan and update the Plan each year
20. **Privacy Policy** – to develop a Privacy Policy as required by provincial legislation
21. **Discipline Procedures** – develop discipline procedures for operators and ensure conformance with ethics
22. **Strengthen Relationships** – continue and expand line of communication with targeted stakeholders including BCWWA, Drinking Water Officers, Small Water System operators and owners, etc.
23. **Review Board Structure** – ensure the Board makeup is reflective of the industry
24. **Constitution Review** – review and update the EOCP Constitution
25. **Randomize Exams** – to create multiple exams, improve exam security and facilitate distance invigilation

## New Kamloops Water Education and Research Centre

**T**hompson Rivers University partnered with the City of Kamloops, and Zenon Environmental Inc to form the TRU Water Education and Research Centre located at the Kamloops Centre for Water Quality. This facility consists of a double classroom and two laboratories designed for instrumentation and science/research activities. The Water Education and Research Centre will accomplish a variety of research goals and will provide much needed training opportunities throughout the entire water industry in addition to facilitating national and international collaborations.

### TRAINING

Thompson Rivers University is developing a two year associated degree program in Water Treatment Technology, scheduled to start in the fall of 2005. This unique program will utilize a distance delivery format combined with a practical component, which will be held on-site at the Kamloops Centre for Water Quality.

The on-site practical will allow students to gain “hands-on” experience in a plant representing the latest technology the industry can offer. Some students, due to the distance from the facility, will have some difficulty attending the on-site practicum in Kamloops. The program is designed to be flexible so an operator working in a plant can apply to have the practicum performed at a more convenient location. The details of the practicum would be organized between the operator, employer and program facilitator.



The program is designed to be flexible and meet the provincial requirements of those already practicing in the water treatment industry, as well as those interested in entering the field. An operator meeting the required education for certification can now transfer that credit into the diploma program.

The program will also recognize past educational and work experience, and will give people working in the industry an opportunity to further their education. Ultimately, those interested will be able to ladder into Bachelor and Masters Degree programs.

TRU envisions developing in the near future an option for waste water technology providing a more complete educational opportunity at our training facility.

For more information on the Water Education and Research Centre contact:

#### Training

Steve Benoit: sbenoit@tru.ca 250-314-6749

#### Research

Wade Archambault: warchambault@tru.ca or 250-314-6739

*For regular updates on program please visit our website:  
[http://tru.ca/schs/dist\\_ed/water/index.html](http://tru.ca/schs/dist_ed/water/index.html)*

## EOCP Director Profile – Pat Miller

**P**at Miller's 30 years of work experience covers most areas of utility infrastructure and regulations, from telecommunications, water treatment and distribution, and wastewater collection and treatment to gas distribution. Pat joined Sun Peaks Resort north of Kamloops in 1996 as the Manager of Utility Services. She is recognized by the industry as an innovator and skilled in regulatory matters.

Pat was elected to the EOCP Board of Directors in 2004. She also sits on the BCWWA Small Water Systems Advisory Committee as well as serving on and is the Chair for Interior Science Innovation Council (an organization that provides financial grants to enable economic development and innovative initiatives in western Canada). Pat also holds EOCP Certification in Wastewater Treatment as well as Water Treatment and Distribution. She is currently working towards her Level III in Water Treatment.



Sun Peaks Resort Corp. had already recognized that finding water at the 4,000 foot level can be difficult and had mandated the use of water conservation measures such as the 6 liter toilet and low flow fixtures. As the manager of the 2nd largest private utility in the province, Pat helped take water conservation to the next level. In 2001, she was instrumental in getting the Province of BC to pass a groundbreaking water tariff that reflected the water conservation mandates unlike any found elsewhere in North America. These measures allowed Sun Peaks to claim a per capita water usage almost 50% of what the average Canadian uses. All this without any of the guests noticing.

# NEW MEMBERS AND UPGRADES

Congratulations to the following new operators and those operators who have upgraded their certification level.  
November 1, 2004 to January 31, 2005

CERT. NO.	NAME	CITY	CERT. NO.	NAME	CITY
4937	Abernathy, Kenneth	SWS	4841	Bruce, Scott	MWWT I Kelowna, BC
4923	Adams, Richard	SWS	4938	Burr, Richard	SWS Comox, BC
4994	Allen, Dean	SWS	4960	Cairns, Brian	SWS Taylor, BC
4487	Allingham, Andrew	WD I	4479	Callow, John	OIT WWC Surrey, BC
4995	Arnold, Gordon	SWS	4971	Cameron, Kevin	SWS Campbell River, BC
5119	Arter, Alan	WD I	3330	Campbell, Ronald	WD II Quesnel, BC
5012	Avison, Norman	SWS	4122	Cannon, Warren	WD II Ucluelet, BC
4918	Baille, Andrew	SWS	4972	Carkener, Michael	SWS Mansons Landing, BC
4922	Baker, James	SWS	4925	Carleton, Glen	SWS Whaletown, BC
4478	Balducci, Patrick	WWC I	4609	Casavant, Gerry	CH Westbank, BC
3111	Barrett, Patrick	CH	4319	Casimer, Chris	SWWS-L Vanderhoof, BC
3528	Barstow, Murray	WD II	4939	Cassels, Wendy	SWS Malahat, BC
3823	Beaton, Kenneth	WD II	4503	Chase, Ron	WT II Terrace, BC
5086	Beblow, Glenn	SWS	5133	Chefero, Douglas	SWS Salmon Arm, BC
3058	Bell, George	CH	4961	Christensen, Wayne	SWS Moberly Lake, BC
878	Bell, Robert	WD III	4997	Collins, Phill	SWS Terrace, BC
4915	Bellamy, Derek	IWWT I	4973	Collins, Robert	SWS Port Alberni, BC
5157	Belyea, Alfred	SWS	4974	Comeau, Michael	SWS Denman Island, BC
5125	Berlin, Reuben	SWS	4916	Craig, Daryle	IWWT I Squamish, BC
5029	Berney, Tricia	SWS	5053	Crawford, Larry	SWS Errington, BC
3529	Bildstein, Timothy	WD II	5109	Crump, Lance	MWWT I Vernon, BC
3318	Biley, David	OIT WD	4194	Cunningham, Adam	WD II Keremeos, BC
792	Bjorgaard, Darryl	WWC II	5022	Davenport, Paul	SWS Prince George, BC
3847	Blakeman, John	WWC I	3273	Davis, Gordon	MWWT I Revelstoke, BC
5091	Bloomfield, Mitchell	SWS	4975	Davis, Stuart	SWS Denman Island, BC
5111	Boberski, Wladyslaw	WD I	1073	DeJong, Paul	IWWT I Kitimat, BC
4970	Boettcher, Ken	SWS	5054	Dennison, James	SWS Bowser, BC
5132	Boileau, Benjamin	SWS	5030	Denslow, Gregory	SWS Nanaimo, BC
5118	Boisvert, Conrad	WD I	5100	Derhousoff, Joshua	SWS Chetwynd, BC
5110	Bosher, Justin	OIT WWT	5031	Desrosiers, Robert	SWS Nanoose Bay, BC
5094	Botwright, Mark	SWS	5013	Deutsch, Richard	SWS Fort St. John, BC
5093	Boucher, Georges	SWS	4999	Devries, Gerry	SWS Smithers, BC
4924	Boughton, Scott	SWS	5055	Dewar, John	SWS Salt Spring Island, BC
5107	Bourassa, Ray	MWWT I	3585	Dhami, Randheir	CH Duncan, BC
4986	Boyechko, Clifford	SWS	1586	Dhillon, Norm	WD I Vancouver, BC
5120	Brach, Jaspal	WD I	3127	Di Stasio, Tony	WD I Coquitlam, BC
5176	Bradley, Michael	WT I	5117	Dick, Stephen	WD I Merritt, BC
4996	Braun, Charles	SWS	5142	Duerst, Hans	SWS Williams Lake, BC
5515	Brazier, Greg	SWS	5077	Duringer, Mike	SWS Chemainus, BC
5108	Brennan, Blaine	WD I	4962	Dyck, Norman	SWS Fort St. John, BC
1976	Brisbin, Larry	WD I	5032	Earthy, William	SWS Nanaimo, BC
5238	Brkich, Nikola	SWS	4940	Easton, Ned	SWS Victoria, BC
2029	Brondgeest, Joffre	WD II	4792	Eby, Tawn	SWS Courtenay, BC
3917	Brown, Iain	WD II	508	Edge, Brent	WT IV Penticton, BC
1009	Brown, James	WD I	4335	Edge, Corey	WD II Delta, BC
3554	Brown, Jim	WD I	4476	Elia, Gino	WD I Fernie, BC
4849	Brown, Robert	CH	4926	Emde, Michael	SWS Campbell River, BC
5152	Brown, Trevor	OIT WWC	5014	Emel, Rodney	SWS Vanderhoof, BC
4048	Brown, Warren	WD I	5000	Ennis, Graham	SWS Smithers, BC

# NEW MEMBERS AND UPGRADES

Congratulations to the following new operators and those operators who have upgraded their certification level.  
November 1, 2004 to January 31, 2005

CERT. NO.	NAME	CITY	CERT. NO.	NAME	CITY
3626	Erickson, James	CH <i>Lumby, BC</i>	5095	Hasler, Adrian	SWS <i>Winfield, BC</i>
5056	Erickson, Phillip	SWS <i>Princeton, BC</i>	4964	Haugan, Kristian	SWS <i>Fort Nelson, BC</i>
5126	Eriksson, Eric	SWS <i>Quesnel, BC</i>	5003	Haywood, Carolyn	SWS <i>Telkwa, BC</i>
5001	Essensa, Harold	SWS <i>Telkwa, BC</i>	5058	Healrd, Donald	SWS <i>Quathiaski Cove, BC</i>
4772	Fischer, Shaun	WD I <i>Abbotsford, BC</i>	5087	Hearnden, Gregory	SWS <i>Smithers, BC</i>
5121	Fitzgerald, Steven	WD I <i>Coquitlam, BC</i>	1900	Heinrich, Claudia	WT I <i>Radium Hot Springs,</i>
5033	Fitzsimmons, Gregory	SWS <i>Errington, BC</i>	5059	Henderson, Edward	SWS <i>Duncan, BC</i>
5148	Fladmark, Daniel	SWS <i>Hudson's Hope, BC</i>	5060	Henriksen, Erik	SWS <i>Duncan, BC</i>
4976	Fleming, James	SWS <i>Powell River, BC</i>	5004	Herman, Ken	SWS <i>Smithers, BC</i>
5034	Foley, Dan	SWS <i>Gabriola Island, BC</i>	4215	Herschmiller, Michael	WD II <i>North Vancouver, BC</i>
4963	Ford, Douglas	SWS <i>Fort St. John, BC</i>	4952	Higginson, Simon	SWS <i>Terrace, BC</i>
4633	Francis, Bart	WT I <i>Kitimat, BC</i>	3944	Hightower, John	WWC I <i>Port Moody, BC</i>
5115	Francoeur, Denis	WD I <i>Port Alberni, BC</i>	5078	Hildebrandt, Edward	SWS <i>Smithers, BC</i>
5015	Friesen, David	SWS <i>Vanderhoof, BC</i>	4977	Hill, Tom	SWS <i>Nanoose Bay, BC</i>
5164	Friesen, Ed	SWS <i>Lindel Beach, BC</i>	5141	Hill, William	SWS <i>Mission, BC</i>
5023	Fulton, Robin	SWS <i>Prince George, BC</i>	5061	Hills, Edward	SWS <i>Mill Bay, BC</i>
3905	Gailey, Neil	WD II <i>Chemainus, BC</i>	5175	Hittel, Tracey	WT I <i>Kitimat, BC</i>
3905	Gailey, Neil	WWC II <i>Chemainus, BC</i>	5096	Hofferd, Brent	SWS <i>Kelowna, BC</i>
5101	Galbraith, Gord	SWS <i>Chetwynd, BC</i>	5134	Holdsworth, Eric	SWS <i>Eagle Bay, BC</i>
5160	Galligos, Steven	SWS <i>Powell River, BC</i>	5062	Holman, Lauren	SWS <i>Duncan, BC</i>
5085	Gareau, Robert	SWWS-L <i>Teslin, YT</i>	3832	Holmes, Dean	CH <i>Faro, Yukon</i>
4032	Gaudet, Daniel	WD II <i>Agassiz, BC</i>	3586	Holtom, Malcolm	CH <i>Kelowna, BC</i>
3535	Gaudet, Glenn	SWS <i>Lazo, BC</i>	4928	Hourston, James	SWS <i>Campbell River, BC</i>
5057	Gaudreau, Jay	SWS <i>Duncan, BC</i>	4953	Hruby, Alexander	SWS <i>Terrace, BC</i>
5129	Geddes, Hal	SWS <i>Boston Bar, BC</i>	4919	Hubbard, Anthony	SWS <i>Barriere, BC</i>
4951	Geeraert, Graham	SWS <i>Terrace, BC</i>	4978	Hume, Gerald	SWS <i>Comox, BC</i>
4160	Gehman, Regan	WD I <i>Cultus Lake, BC</i>	5063	Humphrey, James	OIT <i>Lake Cowichan, BC</i>
5005	Gemmell, Robert	SWS <i>Smithers, BC</i>	3013	Iluk, David	MWWT III <i>Shawnigan Lake, BC</i>
1817	George, David	MWWT I <i>Trail, BC</i>	4868	Inkman, Evan	SWS <i>Harrison Hot Springs</i>
3252	Gibb, David	WWC I <i>Duncan, BC</i>	5050	Jackson, Frederick	SWS <i>Haines Junction, YT</i>
5130	Gilmore, Marilyn	OIT <i>Hope, BC</i>	5161	Jacobs, Raymond	SWS <i>Port Hardy, BC</i>
5139	Gish, Katherine	SWS <i>Bowen Island, BC</i>	5009	James, Simon	SWS <i>Smithers, BC</i>
4941	Gordon, Richard	SWS <i>Victoria, BC</i>	5064	Jansen, Leo	SWS <i>Cobble Hill, BC</i>
4942	Graham, Kevin	SWS <i>Chilliwack, BC</i>	4943	Janszen, Harvey	SWS <i>Saturna Island, BC</i>
4644	Graham, Michael	WT I <i>Terrace, BC</i>	5035	Jarratt, Peter	SWS <i>Victoria, BC</i>
5143	Granberg, Lee	SWS <i>Enderby, BC</i>	5079	Jeannotte, Daniel	SWS <i>Burns Lake, BC</i>
5184	Grant, Blair	WT I <i>Haisla, BC</i>	1852	Jenkinson, Doug	WD I <i>Vancouver, BC</i>
5140	Green, Ken	SWS <i>Hope, BC</i>	5036	Jensen, Xanon	SWS <i>Gabriola, BC</i>
5082	Grier, Allan	SWS <i>Burns Lake, BC</i>	4308	Jewell, Joe	WT I <i>Port Hardy, BC</i>
3965	Grove-White, Stan	MWWT I <i>Kamloops, BC</i>	4010	Jmayoff, Greg	WD I <i>Lytton, BC</i>
4987	Gunness, David	SWS <i>Muncho Lake, BC</i>	5084	Johnson, Sam Jr.	SWWS-L <i>Burwash Landing, YT</i>
5122	Gutierrez, Philip	WD I <i>Coquitlam, BC</i>	4944	Jones, Leonard	SWS <i>Victoria, BC</i>
443	Halfnights, John	CH <i>Williams Lake, BC</i>	5092	Jones, Timothy	SWS <i>North Vancouver, BC</i>
4988	Hansen, Brian	SWS <i>Fort Nelson, BC</i>	3611	Jorgensen, Bruce	MWWT I <i>Maple Ridge, BC</i>
1975	Harbour, Jim	WD I <i>Maple Ridge, BC</i>	5163	Kelly, Joe	SWWS-L <i>Abbotsford, BC</i>
4927	Harder, Irwin	SWS <i>Heriot Bay, BC</i>	5037	Kempe, Ralf	SWS <i>Thetis Island, BC</i>
5002	Harms, Lee	SWS <i>Houston, BC</i>	5065	Keple, Brian	SWS <i>Cobble Hill, BC</i>
4612	Harper, David	WT II <i>Kitimat, BC</i>	5081	Kilb, Bryn	SWS <i>Smithers, BC</i>
685	Hartwell, John	WD I <i>Richmond, BC</i>	5127	Kinloch, Raymond	SWS <i>Quesnel, BC</i>

# NEW MEMBERS AND UPGRADES

Congratulations to the following new operators and those operators who have upgraded their certification level.  
November 1, 2004 to January 31, 2005

CERT. NO.	NAME	CITY	CERT. NO.	NAME	CITY	
4118	Komish, Clane	CH	5183	Mildenberger, Jeffrey	WT I	<i>Kitimat, BC</i>
4929	Kowalchuk, Kerry	SWS	4993	Miller, Lois	OIT	<i>Dawson Creek, BC</i>
4965	Kraus, Allen	SWS	3095	Miller, Parrish	WD II	<i>Terrace, BC</i>
5010	Krueger, Jason	SWS	3201	Mills, Arthur	CH	<i>Whitehorse, YT</i>
5153	Kwiatkowski, Thomas	WD I	4980	Milne, Richard	SWS	<i>Qualicum Beach, BC</i>
4921	LaFond, Dana	SWS	5048	Minar, Marian	SWS	<i>MacKenzie, BC</i>
5066	Lahwald, Wolfgang	SWS	5040	Minard, Norman	SWS	<i>Comms, BC</i>
3946	Laidlaw, Scott	WD II	5041	Misek, Frank	SWS	<i>Duncan, BC</i>
5147	Lambe, Michael	SWS	5227	Misek, Peter	SWS	<i>Duncan, BC</i>
3481	Lang, Robert	WD I	1186	Mitchell, Sterling	CH	<i>White Rock, BC</i>
3481	Lang, Robert	WD II	5182	Mittal, Navpreet	WT I	<i>Kitimat, BC</i>
4617	Langegger, Michael	WT I	5105	Mojak, Darrel	OIT WWT	<i>Surrey, BC</i>
5102	Langford, Joe	SWS	5051	Morin, Dan	SWS	<i>Teslin, YT</i>
4114	Lanigan, Kelly	WD I	5135	Morris, Deborah	SWS	<i>Sorrento, BC</i>
4998	Ledoux, Rony	SWS	5018	Morrison, Phillip	SWS	<i>Vanderhoof, BC</i>
1177	Lee, Barry	SWS	4981	Morritt, Charles	OIT	<i>Hornby Island, BC</i>
5016	Lee, Daniel	SWS	4955	Mroch, Richard	SWS	<i>Dease Lake, BC</i>
4914	Leftrook, Robin	MWWT I	5136	Mudge, Ken	SWS	<i>Blind Bay, BC</i>
475	Lenz, Robert	WWC I	4930	Munro, James	SWS	<i>Campbell River, BC</i>
4945	Lewney, John	SWS	5123	Narayan, Vincent	WD I	<i>Surrey, BC</i>
3139	Longworth, Michael	WD I	5068	Neal, Ken	SWS	<i>North Saanich, BC</i>
5097	Loverenow, Harry	SWS	5026	Nearing, Stephen	SWS	<i>MacKenzie, BC</i>
4144	Lowe, Jason	WD I	5069	Neish, Jennifer	SWS	<i>Port Renfrew, BC</i>
3636	Lucht, Luke	MWWT I	5158	Noel, Andre	SWS	<i>Juskatla, BC</i>
4992	Lusk, Rees	SWS	5149	Nooski, Kenny	SWWS-L	<i>Fort Fraser, BC</i>
5006	MacLean, Bruce	SWS	4931	Norbjerg, Carsten	SWS	<i>Campbell River, BC</i>
5144	Malbeuf, George	SWS	5181	Ocsovai, Jozsef	WT I	<i>Kitimat, BC</i>
4946	Marr, Dana	SWS	4932	O'Donnell, James	SWS	<i>Port McNeill, BC</i>
3603	Marsolais, Luc	WWC II	5174	Oeste, Elbert	WT I	<i>Kitimat, BC</i>
4097	Matthee, Gert	WT II	5070	Olesen, Pauline	SWS	<i>Piers Island, BC</i>
1706	Maxson, Mark	MWWT IV	5080	Olinyk, Jason	SWS	<i>Burns Lake, BC</i>
5024	McAfee, Ted	SWS	1122	Osborne, Ray	CH	<i>Whitehorse, YT</i>
4979	McArthur, Jeremy	SWS	3802	Ough, Jason	CH	<i>Kelowna, BC</i>
5112	McAusland, Graham	WD I	5049	Paton, Darwin	SWS	<i>Prince George, BC</i>
5067	McClure, Dan	SWS	4989	Payette, Greg	SWS	<i>Charlie Lake, BC</i>
5088	McCulloch, James	SWS	5019	Peters, Albert	SWS	<i>Vanderhoof, BC</i>
5156	McGillivray, Frank	SWS	5052	Phillips, Kevin	SWS	<i>Mayo, YT</i>
5038	McGregor, Norwood	SWS	5150	Phillips, Mickey	SWWS-L	<i>Vanderhoof, BC</i>
5017	McKenzie, Rory	SWS	3588	Piguet, Kevin	WD II	<i>Maple Creek,</i>
3334	McKerr, James	CH	3953	Pinder, Kenwood	WD II	<i>Delta, BC</i>
1985	McKinnon, Ian	MWWT III	1405	Pineau, Mario	WD II	<i>Mackenzie, BC</i>
5025	McKitrick, James	SWS	5154	Poag, David	WWC I	<i>Maple Ridge, BC</i>
4966	McLean, Jonathan	SWS	4168	Poland, Dave	MWWT I	<i>Golden, BC</i>
4391	McMahon, Terry	MWWT I	4345	Popescu, Marius	WD II	<i>Richmond, BC</i>
4838	Meger, Patricia	CH	5145	Powell, Ken	SWS	<i>Williams Lake, BC</i>
5039	Mercer, Stephen	SWS	5113	Price, Darryl	WD I	<i>Abbotsford, BC</i>
5047	Meredith, Doris	SWS	5103	Pryzner, Gary	SWS	<i>Moberly Lake, BC</i>
4755	Meyer, Craig	CH	4990	Quibell, Bruce	SWS	<i>Hudsons Hope, BC</i>

# NEW MEMBERS AND UPGRADES

Congratulations to the following new operators and those operators who have upgraded their certification level.  
November 1, 2004 to January 31, 2005

CERT. NO.	NAME	CITY	CERT. NO.	NAME	CITY
1571	Rasmuson, Gerry	WD III	5124	Tack, Dennis	WD I
4009	Reimer, Gil	CH	4948	Taylor, Malcolm	SWS
5098	Remenda, Gordon	SWS	5045	Thiesson, Gary	SWS
5042	Reynolds, Bradley	SWS	4958	Thomas, Lynne	SWS
4947	Richard, Todd	SWS	1617	Thorburn, Brian	WT IV
4982	Richardson, Margaret	SWS	4517	Tomma, James	WD I
4794	Rickard, Rachel	SWS	4117	Tonnensen, William	MWWT I
5116	Roberson, Ian	WD I	1412	Trinkl, Mark	WD I
3009	Roberts, James	CH	5090	Turner, Darrell	SWS
5137	Robertson, Raymond	SWS	4396	Unrau, Brian	CH
4991	Ross, Stewart	SWS	3957	Van De Leur, David	WD II
4983	Roth, Gordon	SWS	5028	Van Dyke, Bart	SWS
5114	Roth, Robert	OIT WWT	4985	Van Vugt, Han	SWS
4933	Ruf, Roland	SWS	4959	Vogel, John	SWS
4956	Russell, Gordon	SWS	4501	Voykin, Paul	WT II
1409	Sahota, Gopal	WD I	4464	Wagantall, Kerry	CH
5187	Sainsbury, William	SWS	5178	Wagner, Iris	WT I
4934	Salter, Philip	SWS	1233	Wagner, Randy	MWWT I
5011	Sanborn, Michael	SWS	5073	Wall, Gerald	SWS
1342	Saunders, William	CH	4967	Walters, David	SWS
4730	Savage, Brian	WWC II	4917	Warawa, Shane	SWWS-M
4753	Savage, Roy	WWC I	4968	Warden, Keith	OIT
4920	Scarff, James	SWS	5106	Watkins, Danny	OIT WD
4984	Schiml, Leah	SWS	5008	Watts, David	SWS
3804	Schmidt, Ernest	CH	5146	Weicker, Teresa	SWS
3231	Schori, Martin	WD II	4936	Wells, David	SWS
4795	Scofield, Robert	CH	628	White, William	WD II
1762	Scott, Douglas	WD I	5173	Whitty, Shawn	WT I
5104	Scott, Wayne	SWS	5083	Wilkinson, Jim	SWS
5180	Seaby, Brian	WT I	5138	Wilkinson, Kenneth	SWS
5071	Seal, Alan	SWS	5151	William, Adam	SWWS-L
4957	Seaton, Robert	SWS	5074	Williams, Frank	SWS
5220	Shepherd, Ryan	WD I	5075	Williams, William	SWS
5043	Shiloff, Frederick	SWS	5076	Williams, Williams	SWS
5027	Shilson, Timothy	SWS	4949	Winter, Horst	SWS
5099	Simms, Jim	SWS	3211	Wirsz, Dale	WD III
3909	Simpkins, Lee	CH	4935	Wise, Michael	SWS
5089	Skriver, Shaun	SWS	4950	Wiznuk, John	SWS
4499	Sladen, Trevor	WWC I	713	Wright, Terry	WD II
5044	Smith, Kerry	SWS	5186	Youn, James	SWS
5162	Smith, Robert	SWWS-L	5131	Young, Allan	SWS
5007	Spaans, Jan	SWS	5128	Zawislak, Lorne	SWS
5072	Stam, Rudy	SWS	5046	Zoet, Richard	SWS
5155	Stevens, Ronald	WWC I	5177	Zoglauer, Alex	WT I
5020	Stoelwinder, Walter	SWS			
5179	Strecheniuk, Craig	WT I			
5172	Streeter, Terry	WD I			
1733	Suhan, Barry	CH			



## NEWLY CLASSIFIED OR UPDATED FACILITIES

Facility No	Facility Name	December 1, 2004 to January 31, 2005	Classification / Level	City/Province
981	Agassiz Secondary School Small Water System		SWS	Agassiz, BC
1004	Airport Pump House Small Water System		SWS	Lillooet, BC
964	Aqua Vista Estates Small Water System		SWS	Mission, BC
943	Beecher Bay First Nation Wastewater Treatment Facility		MWWT II	Sooke, BC
910	Belcarra White Pine Small Water System		SWS	Belcarra, BC
894	Blue Lake Resort Small Water System		SWS	Boston Bar, BC
975	Burrard Generating Station Small Water System		SWS	Port Moody, BC
990	Camp Luther Small Water System		SWS	Mission, BC
953	Canadian Forest Products Ltd.-Mackenzie Distribution System		WD I	Mackenzie, BC
619	Canfor – Vernon Camp Small Water System		SWS	Woss, BC
1005	Cayoosh Park Small Water System		SWS	Lillooet, BC
987	Cedar Acres Small Water System		SWS	Mission, BC
993	City of Enderby Wastewater Collection System		WWC II	Enderby, BC
991	City of Enderby Water Distribution System		WD III	Enderby, BC
992	City of Enderby Water Treatment Facility		WT IV	Enderby, BC
137	City of Prince Rupert Wastewater Collection System		WWC II	Prince Rupert, BC
136	City of Prince Rupert Water Distribution System		WD IV	Prince Rupert, BC
1001	City of Whitehorse Wastewater Collection System		WWC III	Whitehorse, YT
1002	City of Whitehorse Wastewater Treatment Facility		MWWT II	Whitehorse, YT
928	Coghlan Elementary School Small Water System		SWS	Langley, BC
936	Comer Hill Trailer Park Ltd. Small Water System		SWS	Williams Lake, BC
980	Continental Trailer Park Ltd. Small Water System		SWS	Agassiz, BC
965	Copper Island RV Park Small Water System		SWS	Celista, BC
957	Coquitlam Ozone, Corrosion Control and Chlorination WT Facility		WT IV	Coquitlam, BC
930	County Line Elementary Small Water System		SWS	Aldergrove, BC
963	Cowan Point Utility Company Small Water System		SWS	Bowen Island, BC
985	Cultus Country Resort Small Water System		SWS	Lindell Beach, BC
929	D.W. Poppy Secondary School Small Water System		SWS	Langley, BC
974	Del Oro Community Small Water System		SWS	Kamloops, BC
959	Dewdney Elementary School Small Water System		SWS	Mission, BC
996	District of Cowichan Bay Water Distribution System		WD II	Cowichan Bay, BC
1011	District of Hope – South Kawkawa Lake Small Water System		SWS	Hope, BC
517	District of Lake Country Wastewater Treatment Facility		MWWT III	Lake Country, BC
1006	District of Lillooet Industrial Small Water System		SWS	Lillooet, BC
971	District of Vanderhoof Water Treatment Plant		WT I	Vanderhoof, BC
1000	Dog Creek Water Users Community Small Water System		SWS	Nakusp, BC
954	Dogwood Manor Small Water System		SWS	Agassiz, BC
961	Durieu Elementary School Small Water System		SWS	Mission, BC
998	Elk Valley Coal Corp. – Greenhills Operations Small Water System		SWS	Elkford, BC
948	Fentons Well Small Water System		SWS	Quesnel, BC
962	Ferndale Elementary School Small Water System		SWS	Mission, BC
898	Fraser Valley Duck and Goose Ltd. Small Water System		SWS	Chilliwack, BC
251	Ganges Wastewater Treatment Facility		MWWT II	Ganges, BC
952	Gardiner Lake Small Water System		SWS	Salmon Arm, BC
901	Gateway Training Small Water System		SWS	Langley, BC
867	Gills Silverdale Ent. Ltd. Small Water System		SWS	Mission, BC
983	Harrison Hot Springs Elementary School Small Water System		SWS	Harrison Hot Springs, BC
870	Hazelmere RV Park Small Water System		SWS	Surrey, BC
969	Hells Gate Airtram Inc. Small Water System		SWS	Boston Bar, BC
982	Kent Elementary School Small Water System		SWS	Agassiz, BC
920	Lazy Daze Motel and Campsite Small Water System		SWS	Quesnel, BC
926	Lochiel U-Connect Centre School Small Water System		SWS	Langley, BC

## NEWLY CLASSIFIED OR UPDATED FACILITIES

Facility No	Facility Name	December 1, 2004 to January 31, 2005	Classification / Level	City/Province
933	Magna Bay Resort Small Water System		SWS	<i>Celista, BC</i>
253	Maliview Wastewater Treatment Facility		SWWS-M	<i>Saltspring Island, BC</i>
984	McCaffrey Alternate School Small Water System		SWS	<i>Agassiz, BC</i>
924	Montessori School Small Water System		SWS	<i>Langley, BC</i>
942	Nicola Lakeshore Water Utility Co. Ltd. Small Wastewater System		SWWS-M	<i>Merritt, BC</i>
941	Nicola Lakeshore Water Utility Co. Ltd. Small Water System		SWS	<i>Merritt, BC</i>
1007	North Lillooet Small Water System		SWS	<i>Lillooet, BC</i>
900	Northgate Contractors YoYo Desan Camp	SWWS-M	SWWS-M	<i>Fort Nelson, BC</i>
927	Otter Elementary School Small Water System		SWS	<i>Langley, BC</i>
895	Otter Farm & Home Co-Op Small Wastewater System		SWWS-L	<i>Aldergrove, BC</i>
868	Owners Association of Everglades Small Water System		SWS	<i>Mission, BC</i>
892	Panorama Terrace Manufactured Homes Small Water System		SWS	<i>Williams Lake, BC</i>
951	Parks Rental Housing – Aldergrove	SWS	SWS	<i>Aldergrove, BC</i>
934	Parks Rental Housing – Campbell Valley	SWS	SWS	<i>Langley, BC</i>
950	Parks Rental Housing-Tynehead Park	Small Water System	SWS	<i>Surrey, BC</i>
979	Paul Lake Community Wastewater Collection System		WWC II	<i>Paul Lake, BC</i>
925	Peterson Road Elementary School Small Water System		SWS	<i>Langley, BC</i>
899	Pine Ridge Park Small Water System		SWS	<i>Langley, BC</i>
977	Plato Island Resort Small Water System		SWS	<i>Horsefly, BC</i>
989	Poppy Estates Golf Course Small Water System		SWS	<i>Aldergrove, BC</i>
978	Pritchard Community Wastewater Collection System		WWC II	<i>Pritchard, BC</i>
976	RiverBend Resort Small Water System		SWS	<i>Parksville, BC</i>
424	Royston Improvement District Water Distribution System		WD II	<i>Royston, BC</i>
111	Rutland Waterworks District Water Distribution System		WD II	<i>Kelowna, BC</i>
949	Saturna Shores Improvement District Small Water System		SWS	<i>Saturna Island, BC</i>
937	Savona Improvement District Water Distribution System		WD I	<i>Savona, BC</i>
968	Scouts Canada Camp Boyle Small Water System		SWS	<i>Summerland, BC</i>
939	Semiahmoo Fish & Game Club Small Water System		SWS	<i>Surrey, BC</i>
999	Shadybrook Resort Ltd. Small Water System		SWS	<i>Windermere, BC</i>
379	Shames Mountain Ski Area Wastewater Treatment Facility		MWWT I	<i>Terrace, BC</i>
932	Shuswap Lake Utilities Ltd. Water Distribution System		WD II	<i>Blind Bay, BC</i>
960	Silverdale Elementary Small Water System		SWS	<i>Mission, BC</i>
897	Sontula Small Wastewater System		SWWS-M	<i>Sontula, BC</i>
923	South Carvilth Elementary School Small Water System		SWS	<i>Langley, BC</i>
994	Spences Bridge Waterworks District Small Water System		SWS	<i>Spences Bridge, BC</i>
958	Stave Falls Elementary Small Water System		SWS	<i>Mission, BC</i>
955	Strata Corporation – Baker Trail Village Small Water System		SWS	<i>Chilliwack, BC</i>
1012	Surrey Nursery Small Water System		SWS	<i>Surrey, BC</i>
1008	The Cottages at Marble Bay Small Wastewater System Lagoon		SWWS-L	<i>Lake Cowichan, BC</i>
986	Town of Oliver Water Distribution System		WD III	<i>Oliver, BC</i>
972	Vanderhoof Sewage Treatment Facility		MWWT I	<i>Vanderhoof, BC</i>
11	Village of Cache Creek Pollution Control		MWWT II	<i>Cache Creek, BC</i>
940	Village of Nakusp Water Distribution System		WD II	<i>Nakusp, BC</i>
913	Village of Salmo Waterworks Water Distribution System		WD II	<i>Salmo, BC</i>
945	Village of Telkwa Water Treatment Plant		WT IV	<i>Telkwa, BC</i>
947	Village of Warfield Water Distribution System		WD II	<i>Trail, BC</i>
988	Walter's Exotic Meats Ltd. Small Water System		SWS	<i>Langley, BC</i>
956	Waverly Park Water Users Assoc. Small Water System		SWS	<i>Sorrento, BC</i>
946	Weyerhaeuser Kamloops Pulp Division Small Water System		SWS	<i>Kamloops, BC</i>
882	Wild Rose Campground Small Water System		SWS	<i>Hope, BC</i>
922	WIX – Brown Elementary School Small Water System		SWS	<i>Langley, BC</i>
973	Woodlands Utilities Ltd. Distribution System		WD I	<i>Terrace, BC</i>
1013	YMCA Camp Howdy Small Water System		SWS	<i>Port Moody, BC</i>

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# UPCOMING EVENTS

## TRAINING OPPORTUNITIES

EVENT / COURSE	DATE	LOCATION
Wastewater Storm Water Pumps	Sept 7–Nov 23	Burnaby
Water Distribution I	Sept 13–Nov 29	Vancouver
Water Treatment I	Sept 19–23	Kitimat
Small Water Systems	Sept 28–29	Courtenay
Small Water Systems	Oct 3–4	Prince George
Water Quality for Distribution Operators	Oct 17–19	Mid-Island
Cross Connection Control	Oct 17–21	Victoria
Wastewater Treatment IV	Oct 24–28	Vancouver
Supervisory Skills	Nov 14–15	Victoria
Water Treatment I	Nov 28–Dec 2	Vancouver
Wastewater Collection III	Dec 5–9	Vancouver

Please phone BCWWA at 604 433 4389 for information on the above courses or check their website at [www.bcwwa.org](http://www.bcwwa.org)

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