

Non-Municipal Plants

Where can you find a certified operator working these days besides at Municipal or Regional District owned treatment plants? How about at a golf course? Or at a fishing resort or ski resort? Or even at the Vancouver Aquarium? All of these places and more. As the Environmental Operators Certification Program (EOCP) grows, more and more of these non municipal type plants are being classified by the EOCP. Likewise, as these plants are classified, the owners are having their employees certified in order to better operate the plants.

Here are nine wastewater treatment and two water treatment plants that show the diversification of the facilities that the EOCP has classified.
Gallagher's Canyon Golf Course - Kelowna

Class II WWT - Rotating Biological Contractor with discharge to tile field.

Bamfield Sports Fishing and Resort Ltd. - Bamfield

Class I WWT - Activated sludge plant.

Vancouver Aquarium - Vancouver

Class III WT - Works include pH adjustment, filtration, activated carbon and disinfection.

Lilydale Poultry Company - Victoria

Class II WWT - Works include rotary screens, DAF, activated sludge, mechanical dewatering of solids, discharge of effluent to wetland.



Richmond Ice Arena - Richmond

Class II WWT - Sequencing batch reactor.

Western Star Trucks - Kelowna

Class III WWT - Works include grit removal, pH/temp. adjustment, flocculation, air stripping, solids thickening, mechanical dewatering and a complex on-site laboratory.

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Environmental Operators Certification Program

The B.C. 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 1,200 active members.



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Editor's Notes

This issue of the Digest has the usual information for operators including recent Board business and the progress towards Small Systems exams. With winter upon us, and the spring BCWWA Conference and the UBC Operator Symposium months away, now may be the time for operators to have their attendance budgeted and approved.

This issue has a plant profile on BC Rail's Trade Treatment Plant, one of many interesting non-municipal plants classified by the EOCP in B.C. If you would like your water or wastewater system (small or large) profiled, please contact the newsletter editor.

There are also two word game puzzles to test you, and some sample certification questions.

Once again, information on operators, plant profiles, questions or comments on the Certification Program are welcome.

For operators who have access to the internet, check the Digest web page to download the EOCP exam application form. Also you can follow the links to order training manuals from the California State University at Sacramento.

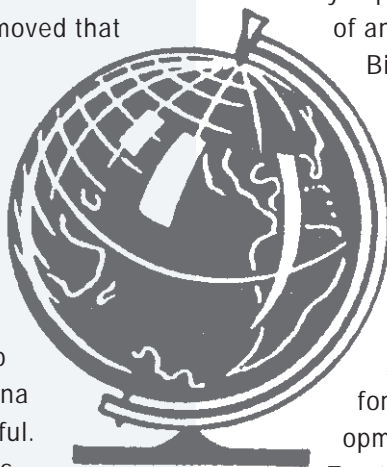
1998/1999 BOARD OF DIRECTORS

Joe McGowan - Chairman
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Kevin Ramsay - Education Liaison
Leo Albrecht - CEU Assessment/Exam Coordinator
Don Gare - Digest Editor
Eric Jackson - Treasurer
Al Lane - Secretary
Dave McLean - BCWWA Liaison

BOARD BUSINESS BRIEFS

Recent business from October 5, 1998 Board of Directors Meeting held in Vancouver.

- The Treasurer's Report showed inflows for October 1, 1997 to September 30, 1998 were \$121,259.93 and outflows for the same period as \$106,599.11 leaving a balance of \$14,660.82. With zero liabilities as of September 30, 1998, the Program is in good financial shape.
- Michael Harrison resigned as a Board Director, which the Board accepted. A letter of thanks will be sent to Mr. Harrison. The Board moved that Dave McLean be appointed as a Director until the next election in May 1999. Al Lane was appointed as Secretary.
- The BCWWA Annual Conference will be held April 25 - 28, 1999 in Vernon.
- Leo Albrecht reported that his trip to the ABC workshop in Helena, Montana at the end of July was very successful. Most beneficial to the EOCP were discussions on small water and wastewater systems courses and exams.
- Don Gare reported that the third issue of the Digest for the year will be mailed out before Christmas. Also that some of the EOCP standard forms will be available on the EOCP web page for operators to download and submit to the EOCP Office. The first form to be made available will be the "Application for Certification".
- The Board moved the following for voting at the May 1999 Annual General Meeting:
 "A motion will be put before the membership at the AGM that the Constitution be amended to reflect that the Secretary and Treasurer are separate positions on the Board".
- Bernie Taekema reported on the status of facility reclassification. Mandatory classification required

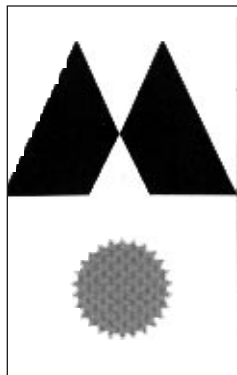


that wastewater treatment facilities be reclassified every five years, which was reached in August 1998. Approximately 90 of 130 facilities have been reclassified. The levels of classification have risen in almost all cases and more operators will be upgrading because of this. There are also more facilities applying for classification.

- Bill Hyslop discussed the content and development of an industrial wastewater treatment exam. Bill suggested assessment of the municipal wastewater treatment exam, retaining 70% of the questions and adding 30% new questions. The industrial exam should focus on biological processes and be developed for levels I through IV. The Board moved that a committee comprising of Directors Bernie Taekema, Joe McGowan and Don Gare, advertise for a RFP (Request For Proposal) for development of the Industrial Wastewater Treatment exams.
- The Board decided to maintain the present fee structure and the program year. Annual operator memberships will remain the same - from June 1 to May 31 of the following year.
- The present OIT certificates are valid for 18 months. The Board will review requests to extend the OIT certificates to 24 months, on an individual basis.
- The Board will not develop certification exams for Laboratory Technicians as it was felt there are not enough Laboratory Technicians in the province to warrant an exam.
- Eric Jackson suggested that the EOCP give two \$500 scholarships to students in the second year of the Water Quality Technology Program at Okanagan University College in Kelowna. Eric will confer with the bursary office at the College.

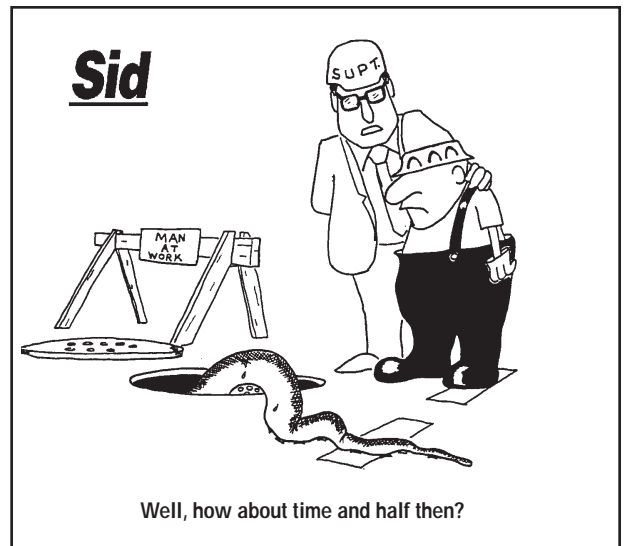
NEW MEMBERS AND UPGRADES

CERT. NO.	NAME	CITY	CERT. NO.	NAME	CITY
2089	Allan, Mark	WD, I <i>Victoria, B.C.</i>	3007	Marr, Andrew	WWT, I <i>Vernon, B.C.</i>
1934	Berscheid, Darcy	WWT, I <i>Cobble Hill, B.C.</i>	2095	Marteinson, David	WWC, I <i>Vancouver, B.C.</i>
2094	Bicego, Romeo	WWC, I <i>Richmond, B.C.</i>	2095	Marteinson, David	WD, I <i>Vancouver, B.C.</i>
1867	Boyles, Terrence	OIT, WWT <i>Cobble Hill, B.C.</i>	3003	Massender, Harold	WWC, I <i>Port Coquitlam, B.C.</i>
1101	Bradshaw, Glen	WWT, I <i>Richmond, B.C.</i>	2088	McInnis, Dale	WWC, I <i>Ladysmith, B.C.</i>
2093	Christensen, Brian	WWT, I <i>Richmond, B.C.</i>	1490	McLean, Robin	WWT, III <i>Winfield, B.C.</i>
867	Cooke, Rodney	WWT, III <i>New Westminster, B.C.</i>	2086	McMillan, William	OIT, WWT <i>Kelowna, B.C.</i>
2013	Coutts, Ray	WWT, III <i>Victoria, B.C.</i>	473	McQuarrie, James	WWT, IV <i>North Delta, B.C.</i>
3000	Cruz, Bayani	WWT, I <i>Prince George, B.C.</i>	2092	Milne, Robert	WD, I <i>Victoria, B.C.</i>
2090	Deane, Victor	WD, I <i>Victoria, B.C.</i>	3005	Newton, Grenville	OIT, WWT <i>North Vancouver, B.C.</i>
2098	Dillabough, Darrell	OIT, WWC <i>Prince George, B.C.</i>	2059	O'Hanley, Michael	WWC, I <i>Victoria, B.C.</i>
2005	Doherty, Steven	WWT, II <i>Vancouver, B.C.</i>	2059	O'Hanley, Michael	WD, I <i>Victoria, B.C.</i>
1714	Douglas, James	WWT, III <i>Pitt Meadows, B.C.</i>	3008	Okert, Allan	WWT, I <i>Coquitlam, B.C.</i>
508	Edge, Brent	WT, I <i>Penticton, B.C.</i>	2009	Parker, Grant	WD, I <i>MacKenzie, B.C.</i>
1115	Edge, Brian	WT, I <i>Penticton, B.C.</i>	1829	Perreault, Denis	WWT, III <i>Sooke, B.C.</i>
1553	Evanchu, David	WT, I <i>Penticton, B.C.</i>	3001	Potter, Leonard	WWT, III <i>Vancouver, B.C.</i>
1925	Favali, Roy	WWT, I <i>Vernon, B.C.</i>	629	Preece, Cam	WD, III <i>Victoria, B.C.</i>
1939	Fjellner, Conny	WWT, I <i>Vancouver, B.C.</i>	1936	Reid, Andrew	WWT, II <i>Summerland, B.C.</i>
2096	Fugel, Thomas	WD, I <i>Vernon, B.C.</i>	3002	Reumayr, Linda	WWC, I <i>New Westminster, B.C.</i>
1775	Gagnon, Richard	WWT, II <i>New Westminster, B.C.</i>	3009	Roberts, James	WWT, I <i>Gold River, B.C.</i>
2099	Greene, Allan	WWT, I <i>Prince Rupert, B.C.</i>	1342	Saunders, William	WWT, III <i>Surrey, B.C.</i>
3004	Hannah, Simon	OIT, WWT <i>Garibaldi Highlands, B.C.</i>	2087	Schan, William	WD, I <i>Chemainus, B.C.</i>
2091	Herrling, Steve	WD, I <i>Sooke, B.C.</i>	3006	Schwarz, Daryl	OIT, WWT <i>Kelowna, B.C.</i>
1759	Horin, Jerry	WWT, II <i>Sardis, B.C.</i>	1949	Scott, James	WD, II <i>Duncan, B.C.</i>
2012	Law, Allan	WWT, II <i>Kaslo, B.C.</i>	2085	Simon, Lane	WWT, I <i>Gold River, B.C.</i>
2097	Lay, Paul	WD, I <i>Vernon, B.C.</i>	1317	Tanaka, Rick	WD, I <i>Surrey, B.C.</i>
873	Lewis, John	WD, II <i>Ladysmith, B.C.</i>	673	Tooms, Roger	WWC, I <i>Terrace, B.C.</i>
1370	Lupien, Cameron	WWT, III <i>Delta, B.C.</i>	1127	Wardlaw, Alistair	WT, I <i>Penticton, B.C.</i>
1036	MacKay, Ted	WWT, III <i>Vancouver, B.C.</i>			



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Development of Small Water & Wastewater System Exams

The EOCP Directors continued discussions on the merits of developing small water and wastewater systems exams at the recent Board Meeting in October. This issue has been brought to the Board on behalf of operators of small systems who have difficulty attaining the required experience to qualify for the Level I exam. An example is a small community with a Level I wastewater treatment facility. The operator of this plant spends an average of eight hours each week operating the plant. It would then take the operator five years to reach the equivalent of one year operating experience to qualify for writing the Level I exam.

Alberta Environmental Protection has instituted a small system classification for all four areas in their Certification Program - water distribution, water treatment, wastewater collection and wastewater treatment - for exams and facility classifications. The EOCP Board is reviewing the Alberta program. Some of the aspects of the Alberta program which follow the recommended standards set by the Associated Boards of Certification are:

- Facility classifications for small water distribution and wastewater collection systems are based on population (less than 500 people), while classifications for small water treatment and wastewater treatment are based on a point system (complexity of the plant).
- The qualifications for small water system or wastewater system certification are: six months of applicable experience, six hours of approved training and successful completion of the examination.

The Alberta Environmental Protection concluded that the certification system using levels I - IV did not adequately serve the operators and owners of small systems and the "Small System" addition to the program was necessary. It has been very well received by the operators and owners alike.

The EOCP Board will continue to assess the feasibility of instituting a "Small System" addition to the B.C. program.

Nominations for Operator of the Year

The Certification Program is soliciting nominations for the Operator of the Year Award. This award, the Victor M. Terry Award, is presented by the BCWWA at the annual spring conference. Nominations may be submitted by operators, municipal officials, supervisors, or any member of the BCWWA.

NOMINATION GUIDELINES

- The nominee must be a member of good standing of the Environmental Operators Certification Program
- The nominee must have provided exemplary service to water or wastewater operations over an extended period of time
- Written nominations must be received by March 1, 1999 at the Board Office.

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PLANT PROFILE

BC RAIL TRADE WASTE TREATMENT PLANT

The BC Trade Waste Treatment Plant, located in Prince George, treats influent from BC Rail's locomotive repair shop and wash rack. The daily flow is approximately 50,000 gallons which flows into an equalization storage tank. The first treatment process consists of an oil and water separator and screen. The second step in the process is a flocculation mixing tank with pH adjustment with acid addition also. Following this is dissolved air floatation thickening and polymer addition. The scum is skimmed off and pumped to a storage tank and the sludge is pumped from the bottom to another storage tank. More polymer is added to the sludge which is then allowed to settle and the clear liquid is decanted back through the system. The sludge is then run through a hydraulic press to produce a biosolids cake. Lastly, the effluent from the DAFs is discharged into the City of Prince George BCR wastewater lagoons.



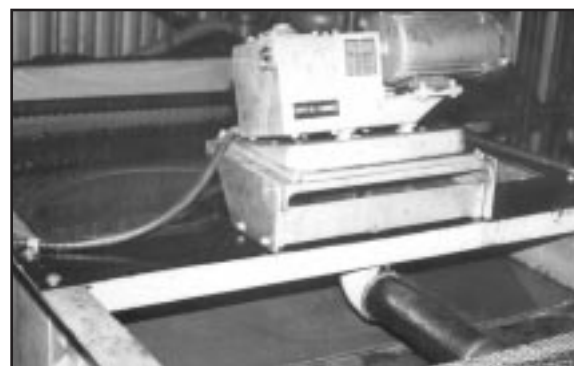
Hydraulic Sludge Press




Flocculation Mixing Tank



Ben Cruz receiving his certification from EOCP Director AI Lane. (Ben is the first BC Rail operator to be certified.)



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Operator Classifications

The table below shows the number and types of certifications held by operators. The table also includes chlorine, independent systems, and operator-in-training certifications. The numbers include only active operators whose 1998 annual dues have been paid. The greatest number of certifications is in the water distribution category.

CLASS	I	II	III	IV	OTHER	TOTALS
WD	458	236	42	1		737
WT	50	10	0	1		61
WWC	307	102	14	0		423
WWT	229	152	100	14		495
TOTALS	1044	500	156	16		1716
CH					197	197
IS					31	31
OIT					43	43
TOTALS	1044	500	156	16	271	1987

NUMBER OF ACTIVE OPERATORS	1227
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Non-Municipal Plants

(continued from page 1)

Welser Inc. - Burnaby

Class II WWT - Works include pH/temp. adjustment, sedimentation/clarification, flocculation, air stripping and advanced wastewater treatment using chemicals.

Englewood Fish Packing Co. - Beaver Cove, Vancouver Island

Class I WWT - Activated sludge plant.

Newstech Recycling Ltd. - Coquitlam

Class III WWT - Works include screening, grit removal, activated sludge, dissolved air floatation, chemical/nutrient addition, solids conditioning and thickening, mechanical dewatering and a full SCADA system.

Hiram Walker & Sons Ltd. - Prince George

Class III WT - Works include ion exchange, activated carbon, screening and disinfection.

BC Rail Ltd. - Prince George

Class II WWT - Works include flow equalization, pH/temp. adjustment, dissolved air floatation, chemical/nutrient addition, mechanical dewatering and a moderate SCADA system. For more details on the BC Rail plant see the Plant Profile.

WINTER SAFETY

THINK SAFETY

Many water utility workers work outdoors in cold weather environment through the winter season. It's an unavoidable situation. The potential of exposure to water can make the situation even more hazardous. Below is a short list of safety tips and health concerns associated with low temperature exposure for you to follow during winter operations.

1. EXPOSURE TO LOW TEMPERATURE

- a. Invest in proper thermal clothing including coveralls, socks, underwear, ear protection, footwear, and gloves. Always wear a hat. An uncovered head can lose up to 50 percent of the body's heat. Keep an extra set of dry clothing with you in case your clothing gets wet.
- b. Replace or dry wet clothing as soon as possible. Wet clothes lose 90 percent of their insulating qualities and will absorb heat from the body.
- c. Layer clothing when possible. The layer closest to the body should be made of a material that increases body temperature and breathes (i.e., cotton). Consider wind chill and shorter daylight hours when dressing for cold weather conditions.
- d. Eat high energy foods such as candy, nuts or raisins. Watch for the early signs of hypothermia and frostbite.

2. HYPOTHERMIA - LOSS OF BODY'S INTERIOR CORE HEAT

- a. Symptoms
 1. Excessive shivering - body attempting to generate heat
 2. Apathy
 3. Loss of consciousness - blood vessels constrict to allow more blood for internal organs and brain
 4. Decreased pulse and breathing rate - death may occur 90 minutes after initial shivering
- b. First Aid
 1. Get victim out of cold and into dry clothing
 2. Call for emergency assistance
 3. Warm body slowly
 4. Do not give victim anything to eat or drink

3. FROSTBITE - FREEZING OF BODY PARTS

- a. Symptoms
 1. Lack of feeling in affected area - temperature of hands and feet can drop more than 20°C without permanent damage
 2. Skin appears waxy and cold to touch
 3. Discolored skin (flushed, white, yellow, or blue)
- b. First Aid
 1. Get victim to warm location
 2. Place frozen area in warm water
 3. Do not rub or massage affected area
 4. Apply dry bandage to blisters or cracks

4. EQUIPMENT

- a. Keep salt and sand in your vehicle to respond to small icing problems
- b. Check your vehicle frequently for sufficient safety supplies such as flares, cones, barricades, traffic signs, flagger paddles, safety vests, flashlights, first aid kit, etc.
- c. Check each vehicle to determine if the vehicle has a well-stocked first aid kit and a fire extinguisher with an updated inspection tag

5. GENERAL SAFETY

- a. Practice defensive driving techniques and be aware of adverse driving conditions
- b. Utilize required personal protective equipment
- c. Follow safe work practices
- d. Never compromise safety to complete a job more quickly

A COUPLE OF JOKES

The Engineer

A chemist, a biologist and an electrical engineer were on death row waiting to go in the electric chair. The chemist was brought forward first. "Do you have anything you want to say?" asked the executioner, strapping him in. "No," replied the chemist. The executioner flicked the switch and nothing happened. Under State law, if an execution attempt fails, the prisoner is to be released, so the chemist was released. Then the biologist was brought forward. "Do you have anything you want to say?" "No, just get on with it." The executioner flicked the switch, and again nothing happened, so the biologist was released. Then the electrical engineer was brought forward. "Do you have anything you want to say?" asked the executioner. "Yes," replied the engineer. "If you swap the red and blue wires over there, you might make this thing work."

The Death of an Engineer

The engineer dies and reports to the pearly gates. St. Peter checks his dossier and says, "Ah, you're an engineer - you're in the wrong place." So the engineer reports to the gates of hell and is let in. Pretty soon, the engineer gets dissatisfied with the level of comfort in hell, and starts designing and building improvements. After a while, they've got air conditioning and flush toilets and escalators, and the engineer is a pretty popular guy. One day God calls Satan on the telephone and says with a sneer, "So how's it going down there in hell?" Satan replies, "Hey, things are going great. We've got air conditioning and flush toilets and escalators, and there's no telling what this engineer is going to come up with next." God replies, "What??? You've got an engineer? That's a mistake - he should never have gotten down there, send him up here." Satan says, "No way, I like having an engineer on the staff, and I'm keeping him." God says, "Send him back or I'll sue." Satan laughs uproariously and answers, "Yeah right, and just where are you going to get a lawyer?"

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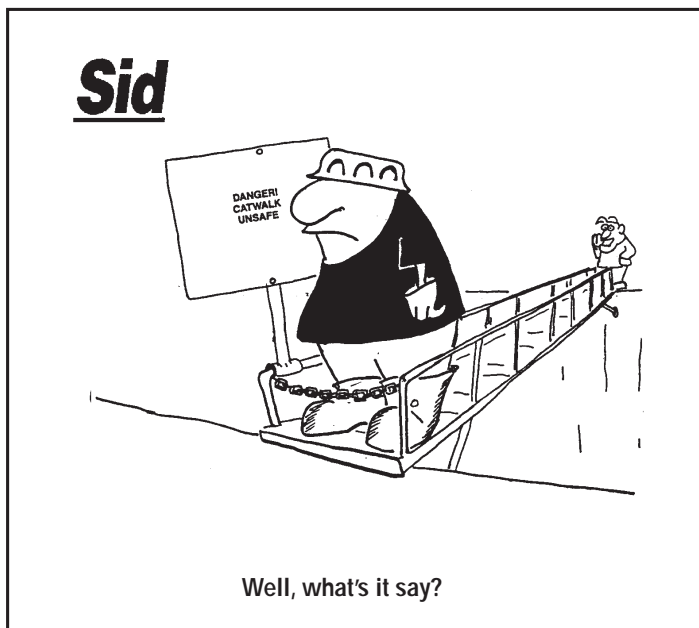
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2nd year students - May - August

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CERTIFICATION QUIZ

WATER

- The most important factor affecting the useful life of piping is:
 - a/ the ability of the materials to resist internal and external corrosion
 - b/ the depth of the pipe
 - c/ the flexibility of the pipe
 - d/ the smoothness of the inside of the pipe
- The most rapid damage to a centrifugal pump is from:
 - a/ excessive head pressure
 - b/ high velocity
 - c/ sand
 - d/ cavitation
- Which of the following is a correct statement about chlorine gas?
 - a/ Chlorine gas is colorless, odorless and toxic.
 - b/ Chlorine gas is heavier than air.
 - c/ Chlorine gas is invisible in water.
 - d/ Chlorine gas will liquefy if heated above the boiling point.
- "Cathodic protection" means protection against:
 - a/ contamination
 - b/ corrosion
 - c/ hardness
 - d/ infiltration
- The drain hole in a hydrant is designed to:
 - a/ let air out when the hydrant is opened
 - b/ relieve excessive pressure when closing the hydrant
 - c/ drain water from the hydrant barrel to prevent freezing
 - d/ none of the above

WASTEWATER

- The primary function of secondary clarifiers is to:
 - a/ provide dechlorination detention
 - b/ remove phosphorus and biochemical oxygen demand
 - c/ remove solids during treatment
 - d/ remove grit carryover
- In a conventional activated sludge plant, oxygen demand is highest:
 - a/ at the head end of the tank
 - b/ in the middle of the tank
 - c/ at the outlet of the tank
 - d/ nowhere - oxygen demand is uniform throughout the tank
- Typically, primary treatment removes ____% of influent suspended solids
 - a/ 10% to 15%
 - b/ 20% to 50%
 - c/ 40% to 60%
 - d/ 50% to 75%
- The biochemical oxygen demand (BOD) in wastewater determines the concentration of oxygen required
 - a/ to stabilize decomposable organic matter by aerobic bacteria
 - b/ to bring oxygen levels in wastewater and atmospheric oxygen to equilibrium
 - c/ to unite chemically with inorganic matter in a sample
 - d/ to oxidize sulfites and convert thiosulfates to sulfates
- Which of the following characteristics are associated with quality activated sludge?
 - a/ black colour, very small particles that do not settle, and musty odor
 - b/ brown colour, no dissolved oxygen content, and good gas production
 - c/ brown colour, some dissolved oxygen content and good settling

More Word Games!

Time to put on your thinking hat. Decipher each box to a common word or expression. The answer to the box on the right is "Blood is thicker than water". The three replies with the most correct answers will each win a cap or a coffee cup - your choice. Mail or fax (250.847.4155) your answers to the Editor by February 1, 1999.

WIN
A CAP OR
A MUG!

BLOOD
WATER

1
RUG
SWEPT

2
KJUSTK

3
SEASON
SEASON
SEASON
SEASON

4
man
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POPIGKE

13
MACBETH
WORDS

14
myself/I'm

15
PAID
I'M
WORKED

16
NOON

Your Cats Rang Man

(Country Anagrams)

Here is another anagram word game. Grab the atlas because the anagrams are countries around the world. Each group of letters when rearranged, spells out a different country. Fax your answers to the Editor at (250) 847.4155 before February 1, 1999. Three winners will be drawn from the correct replies. Winners receive a cap or coffee cup – your choice!

- | | |
|----------------------------|---------------------------|
| 1. Land Cost - _____ | 13. We Send - _____ |
| 2. Rent Again - _____ | 14. Tail Auras - _____ |
| 3. Ma an Pa - _____ | 15. Am Oil Cub - _____ |
| 4. Rat Up Log - _____ | 16. Main Oar - _____ |
| 5. It Ate Ten Suds - _____ | 17. Fan Gains Hat - _____ |
| 6. Row Any - _____ | 18. Lazed An New - _____ |
| 7. My Anger - _____ | 19. Lend Air - _____ |
| 8. Mice Ox - _____ | 20. Airs Us - _____ |
| 9. Dial Than - _____ | 21. Time Van - _____ |
| 10. Laced In - _____ | 22. Its Aura - _____ |
| 11. Moon Race - _____ | 23. And Glen - _____ |
| 12. Lizards Went - _____ | 24. Cacti Soar - _____ |

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KAMLOOPS INDIAN BAND EMPLOYMENT OPPORTUNITY

The Kamloops Indian Band (KIB) is a fast-growing and vital organization committed to the development and progress of its band Members as well as it's community. As such, KIB is looking for a qualified highly motivated and dynamic team leader to fill the following position:

POSITION/TITLE: Water Treatment Plant Maintenance Supervisor - Class II

This is a Two (2) year term position. All applicants will be considered including those retired or near retirement.

NATURE & SCOPE: Reporting to the Senior Engineer, the Water Treatment Plant Maintenance Supervisor is responsible for operating, maintaining and monitoring the water treatment and distribution systems and supervising the Water Treatment Plant staff and on-site maintenance personnel. The work also involves the recording and evaluating of operational and analytical data pertaining to domestic water and wastewater samples under guidelines established by Municipal, Provincial and Federal Governments. The job involves inside and outside work with exposure to noxious odours, chemicals, noise and infectious disease. Under direction of the Senior Engineer, the incumbent will be responsible for the training of staff for operational requirements pertaining to the water treatment. This incumbent is required to exercise constant care in the performance of duties to ensure the safety of co-workers and the public. They must use courtesy and considerable tact in dealing with other Kamloops Indian Band employees, representatives of private companies and the public. The work is differentiated from that of a Water Operator I, by the wider range of duties performed and the higher degrees of independent action allowed.

REQUIRED ABILITIES, KNOWLEDGE & SKILLS:

1. Knowledge and understanding of laboratory analysis techniques and procedures.
2. Knowledge of water treatment and disposal systems, hydraulics and related equipment.
3. Knowledge of operating procedures and permit requirements of water treatment and disposal systems as evidenced by experience in the operation of water treatment and disposal systems.
4. Ability to schedule, prioritize, co-ordinate and supervise the work of the water treatment center staff and on-site plant maintenance staff is needed using considerable independent judgement.
5. Ability to interpret visual operational changes and analytical results for overall system operation and permit compliance.
6. Ability to utilize a computer/PC for storage, calculation and retrieval of inventory, operational and laboratory data and reports.
7. Ability to write reports.

8. Previous experience as an Operator in a water treatment plant in accordance with the Operator Certification Program.
9. Minimum of two (2) years supervisory experience in water treatment center operation.

REQUIRED LICENCE, CERTIFICATION, ETC.:

All requirements must comply to the Operator Certification Program Guideline as laid out by British Columbia Environmental Operators Certification Program Society.

1. High School Diploma, GED or equivalent, and Nine hundred (900) contact hours, or ninety (90) CEU's, or ninety (90) quarter credits, or sixty (60) semester credits of post high school training education in the water or pollution control field, engineering or related science, and Four (4) years operating experience at a Class II or higher facility, and Two (2) years of direct responsible charge (DRC) operation at a Class II or higher facility, and A class II certificate.
2. B.C. EOCP Level II Certificate in the area of work to be performed:
 - a) Water Treatment
 - b) Water Distribution
3. Valid class 5 B.C. Driver's Licence
Pay Grade as Per Salary Grid adopted August 1997
Only short-listed applicants will be notified.

Submit resumes, Cover Letter and names of References

**Attention: Judy Jules
Kamloops Indian Band
315 Yellowhead Highway,
Kamloops, BC V2H 1H1
Phone: (250) 828.9700 Fax: (250) 372.8833**

CERTIFICATION QUIZ ANSWERS from page 11 - 1.a 2.d 3.b 4.b 5.c 6.c 7.a 8.b 9.a 10.c

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UPCOMING EVENTS

BCWWA SPRING CALENDAR 1999

- BCWWA Annual Conference - Vernon April 25 - 28, 1999
- BCWWA UBC Operators School - UBC, Vancouver May 16 - 21, 1999

For information on the Conference or UBC School, please contact the BCWWA Office: Phone: (604) 540.01111 Fax: (604) 540.4077

Operator Workshop (Preliminary)

March 8 - 12, 1999

Kamloops, Coast Canadian Inn
 Chlorine Handling
 Wastewater Treatment Level III
 Water Distribution Level I
 Dam Inspection

March 22 - 26, 1999

Kamloops Wastewater Treatment Plant
 Environmental Laboratory Analysis Procedures

PLEASE NOTE: Applications to write certification exams must be received by EOCP two weeks in advance of exam session. Applications to be sent to: EOCP, 101 - 224 W. 8th Ave., Vancouver, B.C. V5Y 1N5

The Office of Water Programs, at the California State University, Sacramento has a new video training program for Wastewater Collection Operators.

Wastewater Collection Training Videos

Six videos, of about 30 minutes each, will enhance your training of new and experienced collection system operators for the safe operation and maintenance of both sanitary and combined sewer systems. We have developed this effective training series in cooperation with the Office of Wastewater Management, U.S. Environmental Protection Agency. These videos were developed to complement the current two-volume set of training manuals.

Chronic sanitary sewer overflows (SSOs) are producing threats to the public health, pollution of receiving waters, closures of public beaches, and protests from an offended public. Poor collection system operation and maintenance (O & M) is the apparent cause of many SSOs. Six new collection system operator training videos have been developed and are now available illustrating how to safely and properly operate and maintain both separate and combined sanitary sewer collection systems. The titles of the six new videos are:

1. Guardians of Life and testing.
2. TV Shooters
3. Problem Solvers;
4. Way Makers;
5. Flow Movers; and
6. Equipment Experts

The videos show actual crews in the field demonstrating proper, safe procedures to effectively use equipment while supervisors describe the activities of the crews. The video production techniques use a new style multi-dimensional format. In addition to the narrator, many other voices are heard as they speak on the camera. The camera is off the tripod, moving with the action. The comedian is used to demonstrate how not to do the job and to provide entertaining breaks in each training video. An exciting and valuable instructional set of training videos has been developed. The videos can be used alone or can be used to enhance the training provided by the training manuals OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION SYSTEM, Volumes I and II.

The six collection system operator O&M training videos cost \$100.00 U.S. per set plus \$15.00 U.S. for shipping and handling.

For ordering information:

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 (to print out order form)