



Groundwater Matters

British Columbia Groundwater Association Quarterly Newsletter

March 2018

**2018 BCGWA Trade Show
Convention and AGM.**

**A 'WELL SPRING'
OF INFORMATION**

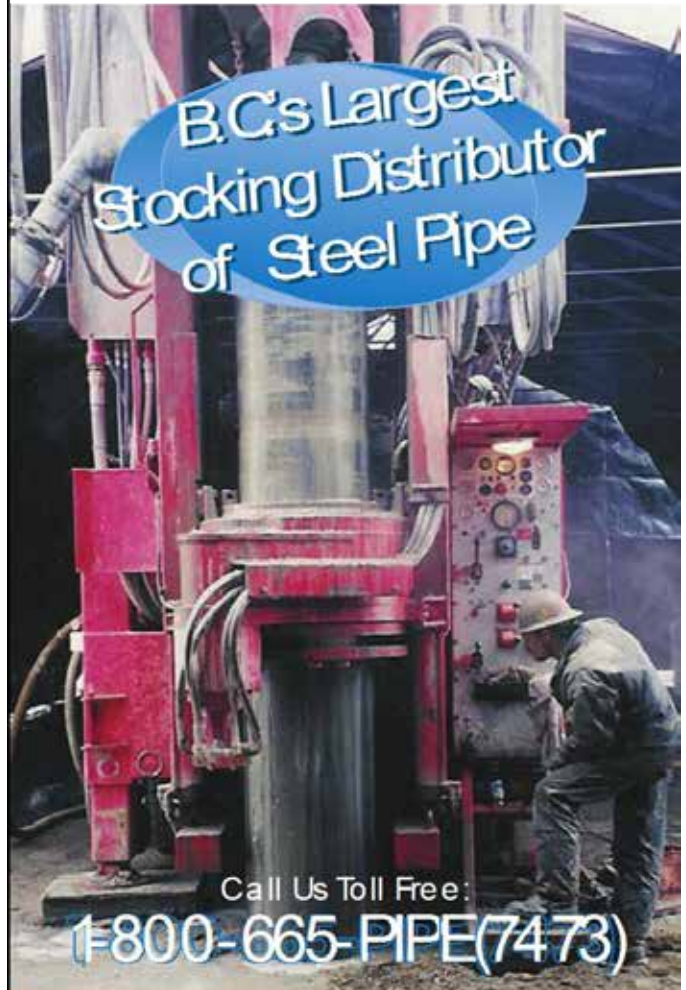


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PRESIDENT'S REPORT

- **March 2018**

Wow, two weeks into 2018 already! As I write this the 2018 AGM and Conference is about a month away and it is shaping up to be a good one. There will be excellent training and education opportunities at this year's conference relevant to all members of our organization. Day 1 will see a full day Pump Installers Course put on by Dave Mellis, and there will be an opportunity on Day 2 of the convention for applicants to write the ITA exam. In addition, Franklin Electric will be putting on a full day seminar on pumps, motors, starters, VFD's at the conference venue the day before the conference begins (April 3). This is a free seminar, and combined with the next day's pump installer's course is a great opportunity for some intensive, high-quality pump training.

There is also a great line-up of professional and technical talks. We all know that we are in the midst of major changes to Regulations that affect us all, our clients and the way we do business. There will be several presentations from Ministry of Environment and MFLNRORD staff providing updates on groundwater licensing, compliance activities and new resources for groundwater information. The conference is a great opportunity to be in the room with regulators and to ask your questions face to face.

On Day 2 of the conference we have assembled a slate of professionals, suppliers and well drillers to speak on an important topic: flowing artesian wells. We reached out to our friends in Washington State and two speakers will be coming up to speak to the issue. Washington has a much more advanced Regulatory framework regarding groundwater licensing and the design and construction of artesian wells, these speakers may provide a glimpse of what may be to come in B.C.

The AGM will be on the morning of Day 1, and I encourage everyone to attend. There are always great discussions and what comes out of the AGM sets the priorities of the organization for the next year. If you have an issue that you would like to see on the agenda, I encourage you to send your thoughts in to Kathy now so that we can carve out some time to discuss it.

I personally have an idea that I would like to float at this year's conference, and that is the notion of the BCGWA developing their own standards for surface seals. I frequently hear the comment that the Groundwater Protection Regulation surface sealing requirements aren't intended to do much for controlling artesian conditions, and that is 100% correct, they are intended to stop water from going down, not up. What if as an association we developed a higher standard for surface seals, that as a baseline would provide more opportunities for controlling artesian flows should they be encountered? What if construction of this more robust surface seal had an Association-recommended standard cost (say \$2,500)? If everyone applied this it wouldn't lose you a job, liability gets reduced, and it may turn into an income stream that would allow contractors to purchase specialized equipment (e.g. grout pumps) and with that equipment, allow you to expand the services you can offer. I'm looking forward to discussing this further with you at the conference.

Stay warm and work safe, and I hope to see you all at the Conference this April

Ryan Rhodes





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Please Come and Visit us at Booth #6, April 4th and 5th, 2018 at the BCGWA Trade Show Convention, located at the Coast Langley Resort and Casino, Langley, BC

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GENERAL MANAGER'S REPORT

- March 2018

For those of you who may be intrigued about where I am in my renovation adventure, let's just say that I have learned a lot about intimidation, mitigation, and litigation. I will have to wait until the June issue to announce that I am back home again. What I can tell you is that making decisions based on budget, time constraints, or fear were the wrong ones. It is WHO you work with that counts.

So if someone is looking to drill a well, or to source the right materials for a job, I hope that they'll reach out to a BCGWA member. Why? Because, because BCGWA members stay informed, BCGWA uphold industry standards, and BCGWA members CARE. I have had the privilege of experiencing this first-hand as your GM.

And now is the time for your Association to give something back to you. We have a fantastic Trade Show, Convention, and AGM planned in Langley in April, with lots of opportunities for learning and networking. It is poised to be a true 'wellspring' of information. Check out the promotional insert included with this newsletter.

Key to effective working relationships is communication. I am very pleased to welcome our Wally Wells, Executive Director of Asset Management BC as keynote speaker at our event. He will recount his experiences as a technical person communicating to non-technical people, particularly older or younger generations, hostile or friendly groups. He will also introduce us to Asset Management BC and what they strive to do to help us better manage our water-related assets, of wells are a huge component.

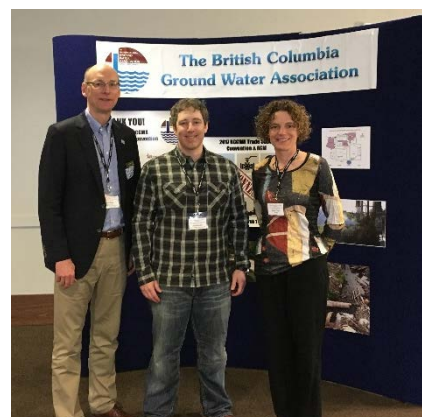
We will also have the opportunity to meet the new Head of Aquifer and Watershed Science Group in Victoria, Amy Sloma. She and other government staff will be present to relay important messaging on a variety of matters, and to be available to

answer questions. Check out the Province's update in this newsletter to learn what they have planned for the convention, and to learn about GWELLS and regulatory and research initiatives that they have on the go.

Also planned for the convention is a line-up of trade and technical speakers from BC, Washington, and Ontario on the topic of flowing artesian wells. This is a great opportunity to continue the dialogue between industry and government on how to protect ourselves, our clients, and the resource from costly out-of-control scenarios. Upgrading surface seal practices, publishing more flowing well advisories, and creating access to emergency funds are all important elements. We've come a long way, and there is still more work to do.

Communication, whether it be in a family, friendly, or professional setting, is key to meeting our goals. It is also key to avoiding costly misunderstandings. In my opinion, nothing compares to communicating in person. So let's all come away from our desks and our trucks and hang out for a couple of days at the convention. You will leave feeling connected, energized, and ready to take on new challenges. After all we 'get by with a little help from our friends.'

On-line registration is open until March 23 at www.bcgwa.org.



I look forward to seeing you there!

Kathy Tixier

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DOWN TO EARTH BUSINESS

2018 BCGWA Trade Show Convention and AGM



A 'WELL SPRING' OF INFORMATION

April 4 & 5, 2018 Coast Langley Hotel & Convention Center,
20393 Fraser Highway, Langley BC

Full 2-Day Delegate Package:

- BCGWA members \$450 +tx
- Non-members \$500+tx
- Spouse, addl employee, or addl booth participant \$350 +tx

Trade Show Booth:

\$750

SOLD OUT!
2-day delegates package)

1-Day Well Pump Installers Course:

\$500+tx

(includes lunch & Trade show)

We are setting the stage for another successful event in 2018, featuring a 2-day interactive Trade Show, a full day Well Pump Installer course, and an opportunity to challenge the ITA Well Pump Installer exam. One Wednesday we'll kick off a Hard Day's Night with the Fab Fourever at our President's Gala.

A variety of informative talks are planned on flowing artesian wells, groundwater regulations and information resources in BC, and other topics of interest to industry practitioners. We are excited to welcome Wally Wells, Executive Director of Asset Management BC, as our keynote speaker.



Register on-line at www.bcgwa.org until Friday March 23



PRELIMINARY EVENTS CALENDAR



DATE	DAY	TIME	EVENT	ROOM	DESCRIPTION	
April 3	Tues	7:00 pm - 10:00 pm	Trade Show	Ballroom 1	Trade Show Set-Up (for those that want to set up early and attend AGM)	
DAY 1	April 4	Wednesday	7:00 am - 3:00 pm	Reg	Main Foyer	Registration Desk Open
			7:00 am - 11:30 am	Trade Show	Ballroom 1	Trade Show Set-Up
			7:00 am - 8:30 am	AGM	Foyer, Exec Boardroom	Director's Breakfast and AGM Attendees Breakfast
			8:30 am - 11:30 am	AGM	Mackie	BCGWA Annual General Meeting (AGM)
			9:00 am - 12:00 pm	COP	Executive Boardroom	Community of Practice Meeting (MOE and MFLNRORD)
			10:00 am - 10:30 am	Break	Ballroom 1	Coffee Break
			8:30 am - 4:30 pm	Course	Michaud	Well Pump Installer Course
			12:00 pm - 1:00 pm	Lunch	Ballroom 2	Lunch with General Manager welcoming address
			1:00 - 4:00 pm	Trade Show	Ballroom 1	Trade Show (FREE Trade Show Walkabout 9:00 - 11:30am)
			1:00 pm - 1:30 pm	Talks	Mackie	Lindsay Macfarlane, Ministry of Environment and Climate Change Strategy - 'GWELLS Workshop'
			1:30 pm - 2:00 pm		Mackie	Michael Payne, Payne Engineering Geology, 'Onsite Sewage Success & Failure Based on Groundwater Monitoring: 3 Examples'
			2:00 pm - 2:30 pm		Mackie	Scott King, NGWA President-elect, Wood Group PLC - 'Oil Sands and Groundwater'
			1:00 pm - 4:00 pm	Focus Gp	Bedford	Regulatory Focus Group Sessions
			2:30 pm - 3:00 pm	Break	Ballroom 1	Coffee Break
			3:00 pm - 3:30 pm	Talks	Mackie	Ross Kreye, Ministry of Forests, Lands and Natural Resource Operations and Rural Development - 'Groundwater Licensing Update'
			3:30 pm - 4:00 pm		Mackie	Harm Demon and Darci Johnston, Ministry of Forests, Lands and Natural Resource Operations and Rural Development - 'Joint Compliance Projects for Groundwater Protection'
			4:00 pm - 6:00 pm	Trade Show	Ballroom 1	Trade Show Meet & Greet and Silent Auction
			6:00 pm - 11:00 pm	Banquet	Ballroom 2	President's Gala Banquet with Beatles Cover Band: The Fab Fourever



PRELIMINARY EVENTS CALENDAR



DATE	DAY	TIME	EVENT	ROOM	DESCRIPTION	
DAY 2	April 5	Thursday	7:30 am - 11:30 am	Reg	Main Foyer	Registration Desk Open
			8:00 am - 9:00 am	Breakfast	Ballroom 2	Buffet Breakfast
			8:00 am - 1:00 pm	Trade Show	Ballroom	Trade Show (FREE Trade Show Walkabout 9:00 - 11:30am)
			8:30 am - 12:00 pm	Exam	Michaud	ITA Well Pump Installer Certification Exam
			9:00 am - 9:30 am	Talks	Mackie	Amy Sloma, Ministry of Environment and Climate Change Strategy - 'MOE Introductions and updates: from well covers, borehole closures to flowing well advisories'
			9:30 am - 10:30 am		Mackie	Mike Piechowski, Robinson Noble - 'Flowing Artesian Wells - Cross-border comparisons and notes from experience'
			9:00 am - 3:00 pm	Focus Gp	Bedford	Regulatory Focus Group Sessions
			10:30 am - 11:00 am	Break	Ballroom 1	Coffee Break
			11:00 am - 11:30 am	Talks	Mackie	Stewart Hitchon, Well Busters Canada - 'All about Well Buster's Flowing Well Packer'
			11:30 am - 12:00 pm		Mackie	David Slade, Drillwell Enterprises Ltd. - 'Flowing well experiences, Island style'
			12:00 pm - 1:00 pm	Lunch	Ballroom 2	Lunchtime Keynote: Wally Wells, Executive Director, Asset Management BC - 'Communicating from the Other Side of the Fence'
			1:00 pm - 1:45 pm	Talks	Mackie	Robert Stadel, Holt Services Inc. - 'Planning for and Managing Artesian Well Conditions in Washington and Oregon'
			1:45 pm - 2:30 pm		Mackie	Morly Bishop, Capri Insurance - 'Contract language and Directors and Officers Insurance - Protecting yourself from catastrophic losses'
			2:30 pm - 3:00 pm		Mackie	Stephanie MacDonald and Tess Mawson, Global Aid Network Canada - 'Give Water. Give Life. Sustainable strategies for Global Impact'
			1:00 pm - 3:00 pm	Trade Show	Ballroom 1	Trade Show Take-Down



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To show our support of the water well Industry, Pinnacle will donate \$10 to the BCGWA from every pail of drilling fluids sold to water well contractors in BC



CASCADES BALLROOM

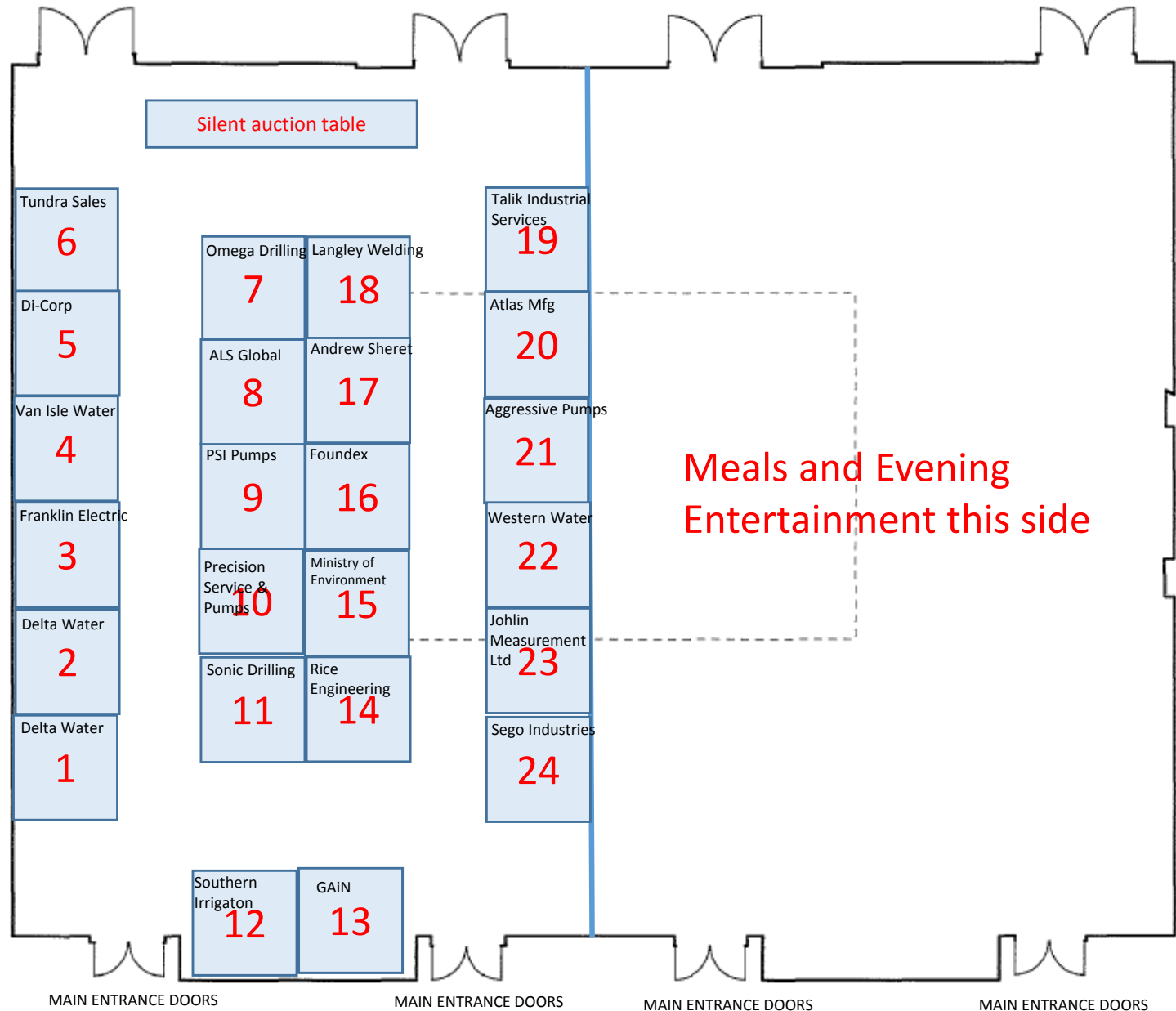
← 100' 6" →



Each square represents one 9' x 9' pipe and drape booth, including:

- 8' high back wall
- 4' high side wings
- 2' x 6' skirted table
- two chairs
- one 120V / 750W electrical outlet

75' 6"





WELL PUMP INSTALLER COURSE

APRIL 4

Title: Groundwater and Well Pump Fundamentals
 Instructor: Dave Mellis, Pump Systems Incorporated
 Date: April 4, 8:30am-4:30pm, with 1.5 hour lunch break
 Location: BCGWA Trade Show & Convention, Coast Langley Resort & Casino



Course description: This course reviews those aspects of hydrogeology, well pumping systems, workplace safety, regulations, and industry best practices that pertain to the installation, troubleshooting, and repair of well pump systems. The course is designed to help individuals prepare to challenge the ITA Well Pump Installer certification exam, but is also open to other groundwater practitioners, including consulting engineers, government agents, and well drillers.

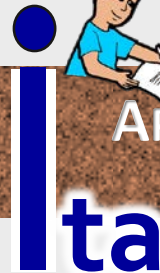
Cost: Early bird (before Feb 1): \$450 Regular rate (up to Mar 23) : \$500
 Includes breakfast, lunch, and coffee breaks.

A recommended list of study materials will be distributed upon registration.



ITA WELL PUMP INSTALLER EXAM

APRIL 5



Taking the Well Pump Installer Course does not automatically qualify you to challenge the ITA certification exam.

For eligibility requirements to challenge the exam:

- Visit the ITA website for the Well Pump Installer course at www.ita.org/well-pump-installer.

If you intend to write the exam:

- Download the application form from www.ita.org/well-pump-installer.
- Those approved to challenge the exam will be notified by the ITA, with follow-up from the BCGWA. The exam will be held from 8:30am to 12:00pm at the event.
- No application fee. A registration fee of \$500 (including lunch and coffee breaks) will be charged to you. Payment of Work Experience fee to the ITA before January 31.
- Notify manager@bcgwa.org that you have submitted your application if you wish to write the exam at the convention.
- Wait to be notified by the ITA if you have been approved to write the exam. If approved, the BCGWA will contact you with additional information about the exam.



ANNUAL GENERAL MEETING



Join us for our 47th Annual General Meeting on:

Wednesday, April 4, 2018

8:30-11:30 am

Coast Langley Hotel and Convention Center



Breakfast

for Directors and
AGM Attendees:

7:00am – 8:30am

Tentative AGM Agenda:

- Our 2017 Financial Report
- Bylaw revisions under the new *Societies Act*
- Election of 2018 Board of Directors and Executive Committee
- Reports from the President, MD, and Board of Directors
- Business from the 2017 AGM and New Business

The following positions are open and will be voted upon at the AGM:

- Secretary
- Cariboo Region Director
- Kootenays Region Director
- Okanagan Region Director
- Fraser Valley Region Director
- Manufacturers & Suppliers Division Director
- Professional & Technical Members Division Director
- Geotech/Environmental Driller Division Director
- Well Pump Installer Division Director
- Director at Large

Special resolutions for proposed changes to our bylaws, a detailed AGM Agenda, and proxy/voting/ballot forms will be circulated to all members at least 2 weeks prior to the AGM. All members are welcome to attend the meeting, but only Full (Corporate) members can vote or stand for election.

PRINTABLE REGISTRATION FORM

for on-line registration, go to www.bcgwa.org

Name: _____ (first) _____ (last)

Company: _____

Phone Number: _____ (secondary) _____ (cellular)

Mailing Address: _____ (street number, name) _____ (town/city) _____ (province)

Email: _____

	Early-Bird (before Jan 31)	Regular	Subtotal
WELL PUMP INSTALLER COURSE - April 4			
Groundwater and Well Pump Fundamentals Instructor: Dave Mellis, Pump Systems Incorporated Time: 8:30am - 4:30pm Includes lunch, coffee	_____ @ \$450	_____ @ \$500	\$ _____

	Early-Bird (before Jan 31)	Regular	
TRADE SHOW BOOTH - April 4, 5			
9' x 9' Fully Draped Booth Includes Full 2-Day delegate package for primary participant	_____ @ \$700	_____ @ \$750	\$ _____
Preferred Booth Location	1st choice	2nd choice	3rd choice
See Trade Show Map for Booth Locations	_____	_____	_____
Trade Show Walkabout Visit our Trade Show for free from 9:00-11:30am on April 4 or April 5. No pre-registration required			

	BCGWA Member	Non-Member	Spouse, Addl Employee or Addl Booth Participant	Subtotal
CONVENTION & AGM DELEGATE - April 4, 5				
Full Two-Day Delegate Package - Wed & Thurs April 4, 5 Includes AGM, Trade Show, Talks, President's Gala, Keynote Address, breakfasts, lunches, coffee & snacks	_____ @ \$450	_____ @ \$500	_____ @ \$350	\$ _____
One-Day Delegate Package - Wednesday Apr 4 Includes AGM, Trade Show, Talks, President's Gala, breakfast, lunch, coffee and snacks	_____ @ \$350	_____ @ \$400	_____ @ \$250	\$ _____
One-Day Delegate Package - Thursday Apr 5 Includes Trade Show, Talks, Keynote Address, breakfast, lunch, coffee and snacks	_____ @ \$200	_____ @ \$250	_____ @ \$150	\$ _____
One-Day Student Admission Includes Trade Show & Technical talks		_____ @ \$50		\$ _____
President's Gala Banquet Ticket - Wednesday Apr 4 Includes dinner and entertainment by Beatles Cover Band: Fab Four-ever		_____ @ \$100		\$ _____
YES! I would like to help sponsor this event All sponsors will have their names and logos prominently displayed at the event	_____ @ \$200	_____ @ \$400	_____ @ \$600	_____ @ \$Other
YES! I am planning to bring an item to donate to the silent auction	<input type="checkbox"/>			
YES! I would like to display my rig / equipment in the parking lot	<input type="checkbox"/>			
Special Notes / Dietary Restrictions _____				

Subtotal	\$ _____
GST (@ 5%)	\$ _____
Total	\$ _____



ACCOMMODATION

Room blocks have been set aside at the following hotels for our trade show and convention participants:

[Coast Hotel and Convention Centre – Langley City:](#)



20393 Fraser Highway

Convention venue

604-530-1500

Room type: Standard, Superior, or Suites

Rate: \$115, \$125 or \$199 + tx

Reserve before: Mar 3, 2018

Booking reference: GF6093

[Days Inn & Suites - Langley:](#)



20250 Logan Avenue

7 min walk from convention

604-539-0100

Room type: Standard or Suites

Rate: \$99 + tx or \$119 + tx

Reserve before: Mar 12, 2018

Booking Reference: bcgwa

[Best Western Plus Langley Inn:](#)



5978 Glover Road

14min walk from convention

604-530-9311 or 1-888-530-9311

Room type: Standard

Rate: \$119 + tx

Reserve before: Feb 26, 2018

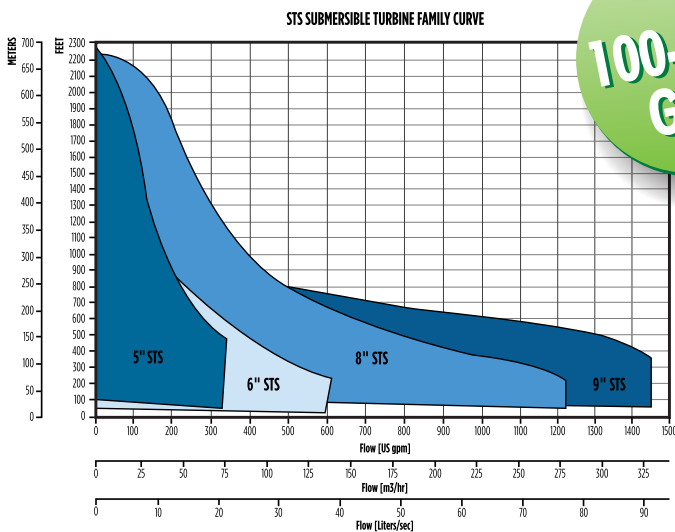
Booking Reference: bcgwa

**Group rate offered
until Mon Feb 26**



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Franklin Electric is pleased to announce Franklin *TECH* will be held in conjunction with BCGWA 2018 Convention. This seminar is designed to provide water systems professionals with interactive classroom and hands-on training.

Trainer Mr. Gaston Brazeau Franklin Electric - Field Service Engineer.

Location: Coast Hotel & Convention, Langley, BC.

Date Tuesday April 3

Topics :

8-12 noon

Basic motors, pumps, Submersible motor design and construction; overview of control and protection devices; application and troubleshooting; basic electricity and use of meters.

Lunch served 12 - 1 pm

1 – 4:30 PM

SubDrives - Large VFD - Starters - Controls

Selecting the proper motor starter, applications and design considerations, noise suppression, voltage and phase requirements.

Franklin **TECH** courses are open to professional water systems distributors, contractors, and installers. There is no charge for attendance, but classes are limited to the first 20 who register. Space is limited, however, all participants must pre-register by calling the Franklin Technical Service Hotline at 800.348.2420, or by sending an e-mail request to hotline@fele.com.

For more information, please contact,

Franklin Electric BC Territory Manager – Garth Nye 250 686 7473 email garth@gnyeassoc.com

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UPCOMING EVENTS



Annual conference, AGM, and Trade Show
April 9 to 10, 2018
Coast Bastion Hotel, Nanaimo

Water Stewardship in a Changing Climate

Field Trip, Public Lecture & Symposium in Nanaimo

Co-hosted by the Partnership for Water Sustainability in BC
April 11 to 12, 2018
Coast Bastion Hotel, Nanaimo
www.civicinfo.bc.ca/event/2018/Nanaimo-Water-Symposium



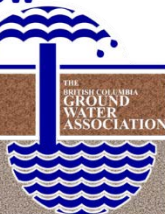
Resources for Future Generations (RFG)
2018 Conference
June 16 to 21, 2018
Vancouver Convention Centre



Canadian Geotechnical Conference and
Joint CGS/IAH-CNC Groundwater
Conference
Sep 23 to 26, 2018
Shaw Conference Centre, Edmonton

2018 BCGWA Trade Show Convention and AGM

A 'WELL SPRING'
OF INFORMATION



Wed April 4 & Thurs April 5
Coast LANGLEY
Hotel & Convention Center

We are setting the stage for a successful event in 2018, featuring our AGM, a 2-day interactive Trade Show, a Well Pump Installer course and opportunity to challenge the ITA exam, a lunchtime keynote address, and informative talks and engagement sessions. The 'Fab Fourever' Beatles tribute band is set to get us back on the dance floor at the President's Gala.

More information included in this newsletter

On **March 13, from 11am to 12noon**, the Fraser Basin Council and OBWB are co-hosting a **webinar: "Getting to Know the Guides and Toolkits for Sustainable Land and Water Use Planning."** For more information, contact Kellie Garcia at kellie.garcia@obwb.ca or 250-469-6321.

Please note that the email address secretary.bcgwa@shaw.ca is no longer being actively monitored. Please reach out to our Executive Secretary at secretary@bcgwa.org



604-534-3168 or 1-800-900-2220

We're having a Ground Breaking Sale to celebrate our new building and to thank our dealers who have helped to make it possible!



Pentair Intellikit Special **\$1,499.00**
10 GPM 1 HP VFD Package
Includes Stainless Steel Manifold and
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Johnson Nu-Well
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1" x 10" for **\$66.79** each

1 1/4" x 13" for **\$83.19** each

Case quantities (6) only.

Consists of:

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- ✓ 1/2" or 3/4" MPT Boiler Drain
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- ✓ 1/4" x 3" Brass Nipple
- ✓ 1/2" or 3/4" Relief Valve 75 psi

No lead fittings



Quantity Limits and
 Conditions May Apply
 Current Accounts Only
 Sale ends March 31, 2018

Is Self-Regulation in Jeopardy?

By Chad Petersmeyer,
Professional & Technical Member Director

In BC, geoscientists and engineers currently have the freedom of self-regulation. This is provided under the Engineers and Geoscientists Act and through the professional association, Engineers and Geoscientists BC. EGBC governs these professions by determining and maintaining standards of admission and practice, and establishing a code of ethics, policies, etc.

In October 2017, the province announced that they are reviewing the professional reliance model for approving Natural Resource projects in BC. Does this mean that review of self-regulation may be next?

It's not a stretch. In June 2016, the province of BC put an end to self-regulation of Realtors¹. This occurred after incidents of repeated shady business practices in the real estate industry, including 'shadow flipping' of properties which benefited unethical realtors and hurt clients. Christy Clark, the Premier at the time, said "the point of regulation is to protect people."

In 2016, Quebec engineers lost the privilege of self-regulation². The Province of Quebec stated that activities of the profession were seriously affected to the point of putting into question the primary mandate of the Ordre des Ingénieurs du Québec, which is protecting the public.

Sound familiar? The provincial review of professional reliance in BC comes in the wake of recent high-profile projects in the environmental, hydrogeological and geotechnical fields. One of these was the tailings

storage breach at Mount Polley mine. An independent review panel found that the dam failure was at least partially related to a design flaw³. The panel identified a shortcoming in that the Regulator relied on professional practitioners for design, construction, operation, and closure of mines.

In the groundwater industry, the provincial government is not the only authority re-examining its reliance on professionals. Several water districts and at least one municipality on Vancouver Island are considering obtaining a second opinion on hydrogeological assessments for new water supplies. This is the result of too many reports that were heavily biased toward the developers' desires and not having the local government's best interests in mind.

This is a reminder for not only professional engineers and geoscientists, but all members of the BCGWA. We benefit from a high level of confidence from regulators, clients, and the general public. If some of our colleagues operate in a manner that jeopardizes this confidence, it hurts us all. As former APEGBC President Michael Wrinch said, "self-regulation is a right, not a privilege". Our industry needs to take these words more seriously than the Quebec engineers and BC realtors did.



Mt. Polley Mine (BC Ministry of Environment)

¹ <https://www.theglobeandmail.com/real-estate/vancouver/bc-premier-christy-clark-says-change-coming-to-real-estate-industry/article30681945/>

² <http://www.cbc.ca/news/canada/montreal/quebec-engineers-regulate-themselves-1.3667466>

³ <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/further-information/directives-alerts-incident-information/mount-polley-tailings-breach>



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Report from the Provincial Government

In this March 2018 issue:

- Update on groundwater licensing requirements
- Driller & Pump Installer registration requirements
- Regional groundwater program update
- Provincial Groundwater Observation Well Network
- Updates related to the development of GWELLS
- Contact list of groundwater staff with regulatory authority

Driller & Pump Installer Registration Requirements

To ensure you are registered with the Province or to ensure your contact information is up-to-date, visit: <http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells/information-for-well-drillers-well-pump-installers>.

If you would like to become registered or if you would like to update your contact information, email Groundwater@gov.bc.ca.

Have you applied for your Water Licence to use Groundwater?

Don't miss out on protecting your water rights! Apply by March 1, 2019 and your historic use can be recognized, giving your water use precedence over newer users during times of water scarcity and drought.

If you divert and use groundwater from a well or dugout for non-domestic purposes (e.g., irrigation, commercial, industrial, power purpose or waterworks), you must now obtain a water licence and pay water fees and rentals. Domestic well owners (i.e., homeowners with a well that provides water for household use) are exempt from licensing and paying provincial water fees and rentals.

If your water use began on or before February 29, 2016, you are considered an "existing groundwater user" and **you must apply by March 1, 2019** to have your historic use recognized and be in compliance with the law. If you have submitted an application but have not yet received your licence, you can continue to divert, use and store water beyond the deadline of March 1, 2019.

If you apply by the deadline, you will be exempt from paying an application fee; however, annual water rentals are not waived and began to accrue when the WSA came into effect on February 29, 2016.

New groundwater users must have an authorization before the water can be lawfully diverted, used or stored. This applies to any non-domestic groundwater use that began after February 29, 2016.

Visit <http://www.frontcounterbc.gov.bc.ca/Start/ground-water/> to start your online application for a water licence.

For more information visit:

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-licensing-rights/water-licences-approvals/new-requirements-for-groundwater-users>.

BCGWA Convention – Meet Provincial Groundwater Staff

Join groundwater staff from Ministry of Environment and Climate Change Strategy (ENV) and Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) at the BCGWA convention this April to learn more about what's been going on in the last 12 months in the groundwater program.

You will be able to find us at our booth, and we'll also have a series of presentations to share information on our latest projects. Lindsay Macfarlane will provide an update on the GWELLS project (replacing the old WELLS Database) and will be looking for your feedback in a series of engagement sessions. We will also present on recent joint projects between groundwater staff and Natural Resource Officers across the province in addition to providing an update on groundwater licensing. You will also get a chance to meet Amy Sloma, the new Head of Aquifer and Watershed Science (ENV). Amy will take the floor to introduce herself and provide some updates on the groundwater program.

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Regional Groundwater Program Update – South Coast Natural Resource Area

The following is a brief update on some of the activities being carried out by regional groundwater staff in the South Coast Natural Resource Region of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD).

Staffing

The South Coast Natural Resource Area has had a number of staff changes, including the hiring of a new Groundwater Protection Officer, Groundwater Technician and a number of groundwater authorizations staff.

Ground Water Protection Regulation Compliance

Four well inspections were completed, focusing on: flowing artesian wells, a well pit, and various agricultural water supply wells. As a result of these inspections, 3 advisory letters were issued. Inspections are planned in the coming months with the Regional Health Authorities to ensure drinking water supply wells are in compliance with the Groundwater Protection Regulation (GWPR).



Map showing Natural Resource Regional Boundaries

A well drilling advisory indicating the potential for encountering flowing artesian conditions is posted for the Vancouver, Burnaby and New Westminster areas and are available at: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells/information-for-well-drillers-well-pump-installers/well-drilling-advisories/flowing-artesian-conditions-advisories>.

Provincial Groundwater Observation Well Network (PGOWN)

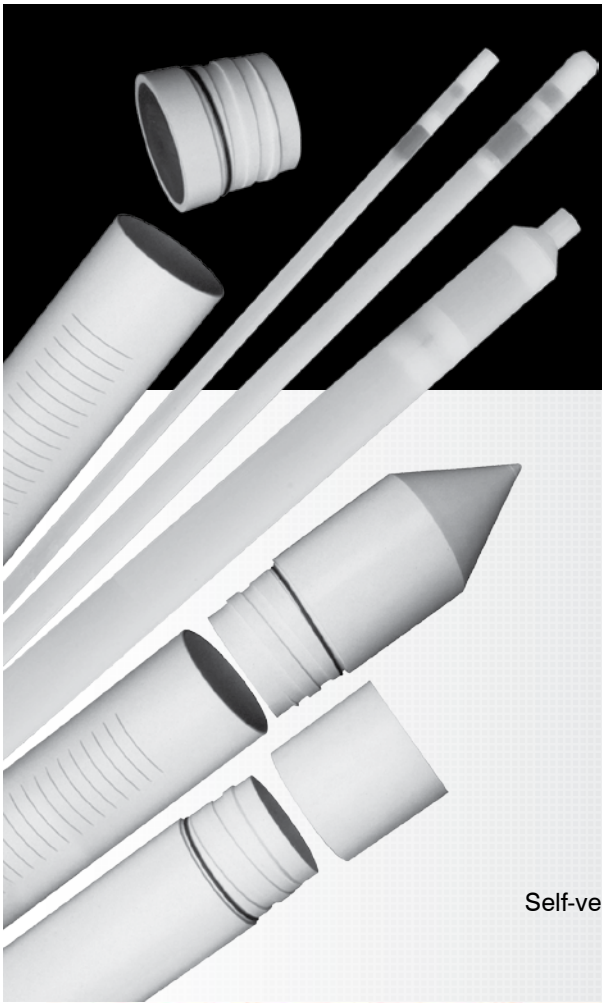
There are 42 active PGOWN wells in the South Coast Region. Some of these wells were added through partnerships with local governments (e.g., City of Abbotsford, Township of Langley, Town of Gibsons, City of Chilliwack, Powell River Regional District). Plans are underway to adopt wells into the PGOWN with local partners in Bowen Island, Squamish and Mission.

A list of active PGOWN wells, by region, is now available online at: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells/aquifers/groundwater-observation-well-network/active-wells>. For the most up to date information on PGOWN wells, refer to the Interactive Map (Groundwater Level Data) located on the PGOWN webpage: http://www.env.gov.bc.ca/wsd/data_searches/obswell/index.html.

Groundwater Science

The Groundwater Science Program has provided funding for a number of projects that have components in the South Coast Natural Resource Region, including:

- Assessment of Hydraulic Connectivity Related to Groundwater Extraction on Selected Sensitive Steams in Support of Science-Based Allocation Decision-Making. Reports from phase one of this research project are now available online in the Water Science Series (<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-science-data/water-science-series>). Phase two of this research project is now underway in partnership with SFU and Township of Langley.
- Updating aquifer classification/mapping in the Fraser Valley (including Chilliwack, Abbotsford, Surrey and Langley) is in the second year of a three year project.
- Development of Monthly Aquifer Budgets in selected aquifers in Langley is complete and the report is now available online in the Water Science Series (link above).



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Provincial Groundwater Observation Well Network Data

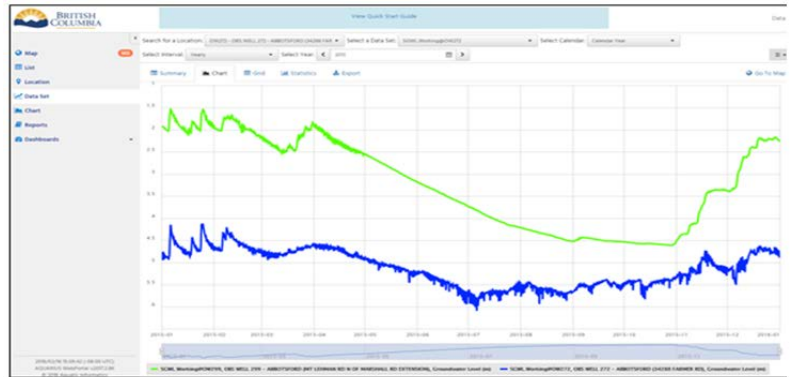
The Provincial Groundwater Observation Well Network (PGOWN) is used to collect water level and chemistry data on aquifers across the Province and the websites the Province uses to relay this data have been updated. You can now find water level data from our observation well network at two websites which serve different purposes. As these sites are new, expect improvements in the near future to improve access and functionality.

Observation Well Interactive Map:

The PGOWN Interactive Map (<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells/aquifers/groundwater-observation-well-network/groundwater-level-data-interactive-map>) is an easy-to-use tool that shows the locations of both inactive (i.e., former) and active Provincial observation wells. Groundwater level chart PDF's, well records, and other Provincial observation well information is housed on this site. There is an introductory video on the right side of the webpage that provides an overview of the map that should be viewed first.

Real-Time Water Data:

The Real-Time Water Data web tool (www.gov.bc.ca/real-time-water-data) allows users to download data sets and create/edit their own charts, including overlaying data from different stations onto a single chart or multiple years from the same station, as well as percentiles. This site includes water level data from the PGOWN, as well as water data from the snow pillow stations and hydrometric stations (others will be added at a later date). There is a Quick Start Guide and an introductory video on the right side of this webpage (before you click on the map) that should be reviewed for new users before using the application.



GWELLS




Well Summary page and access to historical well records.

Historical well records can now be accessed through the GWELLS Search and Well Summary page. There are approximately, 12,000 historical well records currently accessible and more will be made available on a regular basis. This is of significant value to users as now everyone can have access to the original well records, which improves access to data and information.

GWELLS (<https://apps.nrs.gov.bc.ca/gwells/>) is the new application for groundwater well and aquifer data, which will eventually replace the WELLS database. It will incorporate existing functionality found in WELLS and add new functionality to support the *Water Sustainability Act* (WSA) and Groundwater Protection Regulation (GWPR), improve business processes and decision making, and improve access to groundwater data and information.

At the upcoming April BCGWA Convention, several sessions will be set up to get user feedback related to GWELLS. Topics being considered for discussion include: standardizing lithology, aquifer data and user accounts. More details to follow. We would like to get your feedback related to these and other topics related to GWELLS to help ensure we are developing an application that meets your needs!



**We want your
feedback!**

If you have any questions regarding the project or would like to be involved in future user research or testing, please contact Lindsay Macfarlane at Lindsay.Macfarlane@gov.bc.ca.



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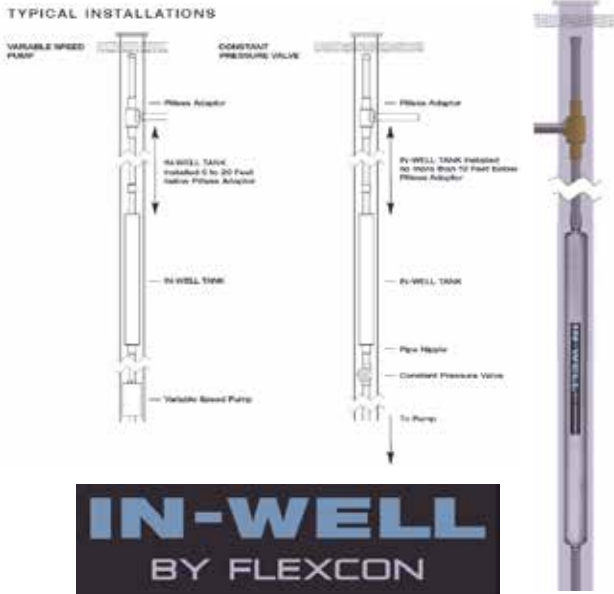
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Report from the Provincial Government

Welcome Amy Sloma

Hello, my name is Amy Sloma and I am honoured and humbled to be taking on the role of Unit Head for the Aquifer and Watershed Science Group at the Ministry of Environment and Climate Change Strategy (ENV).

After completing my B.Sc. in Geological Engineering in 1997 and my M.E.Sc. in 1999, my first employer firmly believed that all junior engineers needed to get their feet dirty and complete a few years of practical experience in the field. By far, I enjoyed drilling the most, because discovering the many facets of hydrogeology are very fascinating. I later moved to Denver, Colorado and was amazed by the mountain stratigraphy and semi-arid climate as well as the threat of over-allocation of groundwater rights, declining water tables due to increased pumping demand and annual summer droughts. Since 2006, I have been working at ENV.

In B.C., we are truly blessed to live in an interesting hydrogeological environment combined with mountains and coastal stratigraphy. However, these conditions also provide challenges (e.g. artesian flows, salt-water intrusion, and a high demand for groundwater) that I envision ENV and BCGWA will continue with their collaborative focus on finding solutions to these challenges. Also from an administrative compliance perspective, there is a large submission gap in the registration of artesian wells that we must collaboratively address this issue through a combination of education and compliance pieces in the future. As you know, the data collected from drilling programs is extremely valuable for making future decisions.

I very much look forward to working with you.

Contact Information for Groundwater Staff with Statutory Designation

Office	Name	Statutory Designation	Phone	Email	Ministry
West Coast (Nanaimo)	Pat Lapcevic, P. Geo	Assistant Water Manager	250-751-3149	Pat.Lapcevic@gov.bc.ca	FLNRORD
	Graeme Henderson, P. Geo	Officer	250-751-7119	Graeme.Henderson@gov.bc.ca	
	Sylvia Barroso, P. Geo	Assistant Water Manager	250-751-3265	Sylvia.Barroso@gov.bc.ca	
	Ben Robinson	Officer	250-751-3266	Ben.Robinson@gov.bc.ca	
South Coast (Surrey)	Mike Simpson, P. Geo	Assistant Water Manager	604-586-2809	Mike.Simpson@gov.bc.ca	FLNRORD
	Bryan Jackson, P. Geo	Officer	604-586-2801	Bryan.Jackson@gov.bc.ca	
	Michele Lepitre, P. Geo	Assistant Water Manager	604-586-2821	Michée.Lepitre@gov.bc.ca	
	Emily Elsliger	Officer	604-586-2802	Emily.Elsiger@gov.bc.ca	
South Area (Penticton)	Skye Thomson, P. Geo.	Assistant Water Manager	250-490-8276	Skye.Thomson@gov.bc.ca	FLNRORD
	Nicole Pyett, P. Geo.	Assistant Water Manager	250-490-2285	Nicole.Pyett@gov.bc.ca	
	Twyla Legault, P. Eng.	Officer	250-490-8287	Twyla.Legault@gov.bc.ca	
	John Pogson, P. Geo.	Officer	250-490-8220	John.Pogson@gov.bc.ca	
South Area (Vernon)	David Thomson, P. Geo	Assistant Water Manager	250-260-4641	David.Thomson@gov.bc.ca	FLNRORD
South Area (Kamloops)	Melissa Wade, P. Geo.	Assistant Water Manager	250-371-6206	Melissa.Wade@gov.bc.ca	FLNRORD
	Laurie Lyons	Officer	250-371-6280	Laurie.Lyons@gov.bc.ca	
North Area (Prince George)	Jun Yin, P. Geo.	Assistant Water Manager	778-693-3015	Jun.Yin@gov.bc.ca	FLNRORD
North Area (Smithers)	Barry Watson	Officer	250-847-7329	Barry.Watson@gov.bc.ca	FLNRORD
Victoria	Amy Sloma, P. Eng.	Deputy Comptroller	250-356-5062	Amy.Sloma@gov.bc.ca	ENV
	Lindsay Macfarlane	Officer (Sr. GW Data Specialist)	250-953-3408	Lindsay.Macfarlane@gov.bc.ca	

For general enquiries, contact Groundwater@gov.bc.ca.

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