

# Update on Groundwater

This report is prepared for you by the water management teams within the *Ministry of Environment and Climate Change Strategy* and the *Ministry of Forests, Lands, Natural Resource Operations and Rural Development*.

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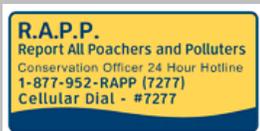
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## Contact Us

The contact information for various groundwater staff across the province is available in every newsletter and we look forward to industry reaching out directly to us with their questions.

## Report Non-Compliance

Notice a well that does not meet the construction standards of the Groundwater Protection Regulation? Or know of someone who is drilling a well or installing a well pump without being registered?



Report it anonymously through the Provincial R.A.P.P. line.

## Important Groundwater Licensing Update!



Government has extended the water licence application transition period for those who were using groundwater on or before February 29, 2016 for any non-domestic use, including agricultural, industrial, commercial and institutional groundwater uses.

**Applicants now have until March 1, 2022 to apply for a licence.**

Because of the importance of a groundwater licence in ensuring sustainable access to water, government has decided to provide additional time to apply for a water licence by extending both the transition period and the application fee waiver period.

On February 29, 2016 the *Water Sustainability Act* (WSA) came into force, modernizing British Columbia's legislative framework governing the allocation and use of water and protection of aquatic ecosystems. The then new law brought in a requirement for agricultural, industrial, commercial and institutional groundwater users to obtain a water licence.

When the WSA came into force, an estimated 20,000 users who were using groundwater up to and on February 29, 2016 were anticipated to apply for a water licence. However, the application intake has been lower than expected and for many groundwater users, recognizing the value of a licence to secure their water rights represents a significant change.

**Existing use groundwater applications can now be submitted until March 1, 2022.**

It is important to note that groundwater users who apply under the transition provisions of the WSA are required to pay annual water rentals retroactive to February 29, 2016 to ensure equity for those who applied early. The longer one delays application, the larger the retroactive total rental payment will be owed.

Applicants who were using groundwater on and before February 29, 2016 who apply before March 1, 2022 will continue to enjoy the following benefits:

- exemption from paying application fees,
- opportunity to receive a date of precedence on their water licence that reflects historic use, and
- ability to continue using water until a decision on the licence application is made.

Agricultural, industrial, commercial and institutional groundwater users are encouraged to apply for a water licence as soon as possible.

For information on how to apply or to submit an application please visit :

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

## Groundwater Wells and Aquifers (GWELLS) – Project Update

The Ministry of Environment and Climate Change Strategy will soon be launching the new groundwater well data submission tool! Our anticipated launch date is end of March/beginning of April 2019.



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## *Groundwater Wells and Aquifers (GWELLS) Project Update – Continued*

### **What does this mean for you?**

Individuals and companies currently submitting well records electronically through EWELLS will be transitioned to the new GWELLS application. Communication and instructions will be made available prior to the launch to ensure a smooth transition.

Users not currently submitting well records electronically will be encouraged to begin transitioning to the GWELLS data submission tool as the Ministry will be moving away from paper submission to allow for more efficient access to data and information.

### **What do you need to do?**

At this time, no action is required. However, you are encouraged to sign up to receive regular communication and announcements about the development of the Groundwater Wells and Aquifers (GWELLS) application to ensure you are up-to-date on project progress and any changes to the application.

Contact Lindsay Macfarlane: [Lindsay.Macfarlane@gov.bc.ca](mailto:Lindsay.Macfarlane@gov.bc.ca), to be added to the email list.

### **Thank you!**

A sincere thank you to everyone who has participated in user feedback related to the development of GWELLS. Your input and feedback helps to ensure that we are developing a system that meets your needs and allows for efficient submission and access to groundwater data and information.

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

## **Did you know...?**

### **Licensing for Geoexchange Wells:**

The *Water Sustainability Act* and Water Sustainability Regulation require licensing for certain types of geoexchange wells. The following is a summary of the basic types of geoexchange wells and if a water license is required to operate each type:

Well type	Water License Required?
<i>Open Loop Geoexchange Wells – Commercial/Industrial</i>	Yes
<i>Open Loop Geoexchange Wells – Residential</i>	Yes
<i>Closed Loop Geoexchange Wells</i>	No

Applications for a groundwater licence can be made online at <http://www.frontcounterbc.gov.bc.ca>. For questions or additional information groundwater users can contact FrontCounter BC Toll free: 1-877-855-3222, from outside North America: 1-778-372-0729 (Monday to Friday, 8:30am-4:30pm) or by email [FrontCounterBC@gov.bc.ca](mailto:FrontCounterBC@gov.bc.ca).

## Provincial Government Groundwater Program Regional Update – South Coast Region

We are pleased to provide a brief update on some of the activities that have been carried out by the regional groundwater staff in the South Coast Region of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (MFLNRORD) since our last update in March 2018.

### Groundwater Protection Regulation Compliance

We have received several inquiries regarding authorization requirements for open loop geexchange wells, and an authorization is required for all open loop geexchange wells under industrial purposes as defined in Schedule A of the Water Sustainability Regulation (either item 9: “heat exchange” for industrial and commercial operations or item 17: “residential heat exchange” for residential dwellings).

Joint inspections have been conducted with health authorities for several drinking water supply systems. In addition, staff continue to focus efforts on public outreach of the *Water Sustainability Act* and Groundwater Protection Regulation at various events and workshops.

### Authorizations

Groundwater management in BC took a big leap in 2016 as the *Water Sustainability Act* came into effect. As of early January 2019, approximately 459 groundwater applications have been received in the South Coast Region, the majority (83%) are existing use licence applications, and about 100 applications have been processed.

The process has not been easy for everyone, but by working together, we are able to better understand the amount of groundwater being used, and take steps towards protecting our valuable water resource for current and future users with ever increasing demand and in a changing climate.

### Staffing

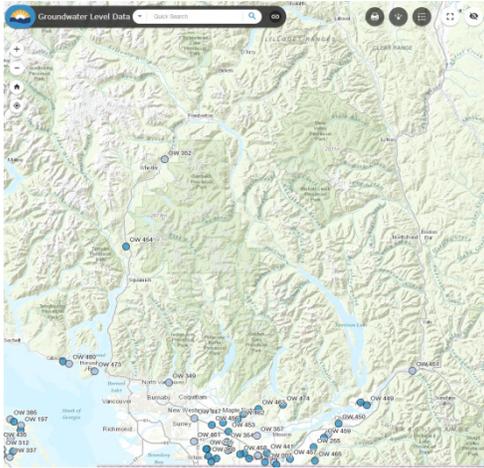
The South Coast Region has had a number of staff changes, including a new water manager (Bryan Robinson), a number of groundwater authorizations staff in Chilliwack, a new Groundwater Protection Officer (temporary assignment), two new co-op students, and the retirement of our Section Head (Ross Kreye) at the end of January 2019.

Ross has been in the natural resource industry for about 30 years, and as one might say, groundwater is in his blood. He grew up on the back of drilling rigs, later joined the public service, and led the effort to map the groundwater resources of the Fraser Valley in the 90’s and was integral in the development of the groundwater section in the South Coast Region. Ross’ work has been the foundation of how we understand and manage groundwater in British Columbia. Working with Ross has been a valuable experience, and he will be greatly missed.



### Provincial Groundwater Observation Network – South Coast Region

The Provincial Groundwater Observation Well (PGOWN) saw a considerable expansion in the past year with 8 new wells added in Miracle Valley, Pemberton, Whistler, Maple Ridge, Keats Island, Squamish, Dewdney, and Deroche.



Interactive Map of Provincial Observation Well Network

The PGOWN is meant to collect long-term groundwater level and groundwater quality data. Hourly groundwater data is recorded for aquifers throughout the Province, and that data is made available to the public from multiple online sources linked to below, including an ARCGIS interactive webmap.

About half of these new observation wells were drilled by the Province, with the remainder donated to the network from other levels of government.

Please note: when exploring the PGOWN websites for groundwater data, several of the newly added observation wells do not yet have their first set of data published. Over the next year, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development will add telemetry to most of these sites so that the groundwater level data will be published online daily.

**Groundwater Level Data 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>

**Real-Time Water Data:** <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-science-data/water-data-tools/real-time-water-data-reporting>

## Provincial Groundwater Science Program – South Coast Region

The Groundwater Science Program has provided funding for a number of projects in the South Coast Region this year including:

- Assessment of Aquifer-Stream Connectivity Related to Groundwater Extraction on Selected Sensitive Streams in partnership with SFU and Township of Langley. Report from phase one is now available on the Water Science Series ([http://a100.gov.bc.ca/appsdata/acat/documents/r52918/52918final\\_1524001009590\\_4000071833.pdf](http://a100.gov.bc.ca/appsdata/acat/documents/r52918/52918final_1524001009590_4000071833.pdf)).
- Aquifer classification and mapping in the Fraser Valley (Hope, Nicomekl-Serpentine) and the Sunshine Coast (Sechelt, Gibsons).
- A two-year project for the Nicomekl and Serpentine watersheds (jointly funded by the Groundwater Science Program and FLNRORD) to determine environmental flow needs, update the aquifer mapping (fiscal year 2018-19) and to build an integrated surface water groundwater budget model (fiscal year 2019-20) for the two watersheds.
- A multi-year, joint project between MFLNRORD and The Ministry of Environment and Climate Change Strategy to develop an Aquifer Dashboard portal, to quickly and easily access aquifer information from a centralized location.

Additional information on groundwater science and monitoring projects can be found in the 2017-18 Compendium of Provincial Groundwater Science and Monitoring Projects:

[http://a100.gov.bc.ca/appsdata/acat/documents/r55469/WSSCompenDec20\\_1545344350132\\_5344148208.pdf](http://a100.gov.bc.ca/appsdata/acat/documents/r55469/WSSCompenDec20_1545344350132_5344148208.pdf).

or

The Water Science Series, a technical publication focusing on scientific reports that relate to the understanding and management of B.C.'s water resources: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-science-data/water-science-series>.

## Well Record Submission

Well records can be submitted electronically (EWELLS) or by mail to the Ministry of Environment & Climate Change Strategy. Electronic submission of well records will replace paper submission to allow for more efficient processing and to help make information more accessible. Paper records will now only be accepted on a Ministry form.

- EWELLS: <https://a100.gov.bc.ca/ext/ewells/>
- Mail: **Ministry of Environment & Climate Change Strategy, PO Box 9362 STN PROV GOVT, Victoria BC V8W**

## 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	<a href="mailto:Pat.Lapcevic@gov.bc.ca">Pat.Lapcevic@gov.bc.ca</a>	FLNRORD
	Graeme Henderson	Officer	250-751-7119	<a href="mailto:Graeme.Henderson@gov.bc.ca">Graeme.Henderson@gov.bc.ca</a>	
	Sylvia Barroso, P. Geo.	Assistant Water Manager	250-751-3265	<a href="mailto:Sylvia.Barroso@gov.bc.ca">Sylvia.Barroso@gov.bc.ca</a>	
	Harm Demon	Officer	250-751-3266	<a href="mailto:Harm.Demon@gov.bc.ca">Harm.Demon@gov.bc.ca</a>	
	Jessica Doyle, P. Geo.	Assistant Water Manager	778 693-3035	<a href="mailto:Jessica.Doyle@gov.bc.ca">Jessica.Doyle@gov.bc.ca</a>	
South Coast (Surrey)	Mike Simpson, P. Geo.	Assistant Water Manager	604-586-2809	<a href="mailto:Mike.Simpson@gov.bc.ca">Mike.Simpson@gov.bc.ca</a>	
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	Twyla Legault, P. Eng.	Officer	250-490-8287	<a href="mailto:Twyla.Legault@gov.bc.ca">Twyla.Legault@gov.bc.ca</a>	
	John Pogson, P. Geo.	Officer	250-490-8220	<a href="mailto:John.Pogson@gov.bc.ca">John.Pogson@gov.bc.ca</a>	
South Area (Vernon)	David Thomson, P. Geo.	Assistant Water Manager	250-260-4641	<a href="mailto:David.Thomson@gov.bc.ca">David.Thomson@gov.bc.ca</a>	
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	Melissa Wade, P. Geo.	Assistant Water Manager	250 371-6206	<a href="mailto:Melissa.Wade@gov.bc.ca">Melissa.Wade@gov.bc.ca</a>	
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	Johanna Wick, P. Geo.	Assistant Water Manager	778 693-2671	<a href="mailto:Johanna.Wick@gov.bc.ca">Johanna.Wick@gov.bc.ca</a>	
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	Lindsay Macfarlane	Officer (Sr. GW Data Specialist)	250-953-3408	<a href="mailto:Lindsay.Macfarlane@gov.bc.ca">Lindsay.Macfarlane@gov.bc.ca</a>	

For general enquiries, contact [Groundwater@gov.bc.ca](mailto:Groundwater@gov.bc.ca).