

Update on Groundwater

THIS REPORT IS PREPARED FOR YOU by the water management teams within the Ministry of Environment and Climate Change Strategy (ENV) and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD).

IN THE MARCH 2021 ISSUE:

- Registering as a Well Driller and Pump Installer
- Technical Assessment Guidance and Before You Drill Brochure
- Provincial Government Groundwater Program Regional Update
- Provincial Groundwater Observation Well Network Update (PGOWN)
- Groundwater Staff Contact List

REPORT NON-COMPLIANCE

- Have you noticed a well that does not meet the construction standards of the Groundwater Protection Regulation?
- Know of someone who is drilling a well or installing a well pump without being registered?

RAPP Report All Poachers and Polluters	24 Hr Hotline: 1-877-952-RAPP Cellular Dial #7277 (On Telus Network)
--	--

CONTACT US

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

Technical Assessment Guidance and Before You Drill Brochure

The recently updated *Guidance for Technical Assessments in Support of an Application for Groundwater Use in B.C. (v.2)* (TAG) has been publicly posted on B.C.'s *Water Science Series* webpage.

In winter 2020 the *Before You Drill brochure* was approved as a plain language companion document to the TAG. The brochure ensures that landowners who are considering construction of a well are aware of licensing, other requirements and potential costs before construction begins. The brochure has been posted on B.C.'s public *water webpages*.

GWELLS Data Entry Guideline

We have heard feedback from the drilling community to provide a guideline to assist drillers while making their online well log submissions. We are pleased to announce the release of the *GWELLS data entry guideline* on our webpage.

The guideline can be found in a few locations on our water webpages and in GWELLS:

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers/groundwater-wells/information-for-well-drillers-well-pump-installers>

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers/groundwater-wells/information-for-well-drillers-well-pump-installers/information-for-well-drillers-well-pump-installers>



Before You Drill

Are you drilling a new water supply well for business, agriculture, waterworks or other non-domestic purposes?

Know your responsibilities!



Did you know?

There were an average 3,976 original well records accessed per month through GWELLS in 2020.

You can maintain this excellent resource by uploading your original well log when you submit your well records online.



Dug Well. Photo: Laurie Lyons

Registering as a Well Driller and Pump Installer

Drilling wells and installing well pumps are restricted activities, and in most cases, must be performed by a registered well driller or a registered well pump installer.

To be a registered well driller or registered well pump installer under the Water Sustainability Act (WSA), you must:

- be at least 19 years old,
- certified by a recognized authority, and
- listed on the provincial registries.

If you are not already listed on the provincial registries, then you need to complete the registration form available at https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/application_for_registration_well_driller_and_well_pump_installer.pdf

There is no fee to become registered!

If you are not registered with the province, you are not legally permitted to perform most well drilling or pump installation activities in B.C. However, you can work as an unregistered well driller or well pump installer under the direct supervision of a registered well driller, registered well pump installer, or a professional with a competency in hydrogeology or geotechnical engineering.

If you are unregistered and work without direct supervision, you are in contravention of the WSA and may be subject to enforcement procedures (WSA Section 48-51).

HAVE SUGGESTIONS FOR IMPROVEMENTS?

Do you have ideas on how the application can be improved? Email gwells@gov.bc.ca

Provincial Groundwater Program Regional Update – South Coast Region

We hope everyone has a healthy and safe 2021. We are pleased to provide a brief report on some of the activities related to groundwater protection and monitoring being carried out by South Coast regional staff in Ministry of Forests, Lands and Natural Resource Operations and Rural Development.

Groundwater Protection Regulation Compliance

In March 2020, just prior to the COVID lockdown, groundwater compliance and enforcement staff and Natural Resource Officers initiated a Flowing Artesian Wells Project focused in the Township of Langley, specifically the Glen Valley Area (GVA). This project was intended as the second phase (field inspections) of the Phase 1 assessment completed in 2011 by the Ministry of Environment and Climate Change Strategy. Field inspections were conducted to assess and identify the current condition of identified (at the time of drilling) flowing artesian wells and additional non-compliance with the Water Sustainability Act and Groundwater Protection Regulation. Twenty-two wells were inspected over four days in the GVA. Of the 22 wells, 13 were confirmed as Flowing Artesian, 10 of which were identified as Uncontrolled Flowing Artesian, meaning the flow cannot be stopped or controlled at any given time. Other non-compliance issues were identified including missing well identification plates, surface around the wellhead not adequately graded, foreign matter within 3 m of wellhead and insufficient well cap/cover. Advisory letters were issued to landowners in September 2020 and the project has since resumed in February 2021.

In the Township of Langley, there are concerns relating to lawn watering from overused aquifers. An existing use groundwater licensing outreach pilot initiative in the



Township of Langley focused on “large lawn” irrigation was completed in February 2021. This involved letter mail outs informing non-domestic users of licensing requirements under the Water Sustainability Act.

In 2020, 26 new compliance complaints were reported. Six complaints are considered complete and 20 are ongoing. Seventeen of the complaints are from pro-active inspections driven by Ministry staff (flowing artesian project), 6 are from public complaints, one relates to licensing compliance and the remaining two are attributed to self reporting from professionals.

In 2020, South Coast Groundwater received 46 enquiries. The majority of enquiries were related to questions regarding licensing and the *Water Sustainability Act* and Regulations and its application.

Groundwater Science Program Activities

We have been working with Ministry of Environment and Climate Change Strategy to undertake additional aquifer mapping in areas including Abbotsford. During 2020, our groundwater and surface water connectivity study in Otter Park, Langley has progressed to Phase 3, and Simon Fraser University (SFU) is analyzing the environmental flows needs of Bertrand Creek to better understand how aquatic habitat responds to stressors. We have also been working with SFU in a study in the Fraser Valley area to map and identify factors controlling where flowing artesian risks occur. Furthermore, we will be completing our groundwater study in the Nicomekl and Serpentine watersheds soon; Hatfield Consultants have compiled a coarse water balance for these two watersheds to enhance our understanding of water availability in this area. Reports from our studies will be available on the Water Science Series:

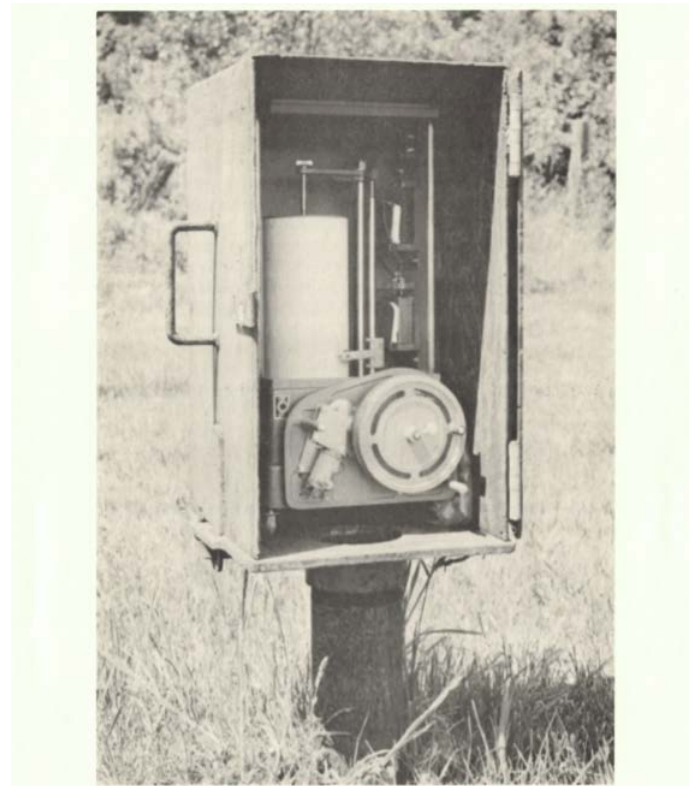
<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-science-data/water-science-series>.

South Coast Provincial Groundwater Observation Network Updates

Currently, the South Coast Region has 56 active observation wells as a part of the Provincial Groundwater Observation Well Network (PGOWN). Seventy-five percent of our stations have telemetry, meaning they allow for “live” monitoring of the groundwater levels at those sites.

In 2020, three new observation wells were added to the PGOWN, including: Observation Well 490 in Langley (Aquifer 24); Observation Well 491 in Maple Ridge (Aquifer 26); and Observation Well 492 in Columbia Valley (Aquifer 20). Furthermore, a pair of clustered observation wells in Sechelt (Aquifer 566), and an observation well in the Sunshine Coast Regional District (Aquifer 560) are planned to be drilled in early March of this year.

In addition to expanding the PGOWN through the drilling of new wells, regional staff continue to partner with local governments to accelerate the network expansion.



Observation Well 13 shown with a T.B.E. water level recorder. Located in Langley (Fraser Watershed) - Active 1964-2003.

Provincial Groundwater Observation Well Network (PGOWN) Update

The Provincial Groundwater Observation Well Network program celebrates 60 years in 2021! In each BCGWA newsletter this year, we will be highlighting various aspects of the history, interesting stories, photos and facts from this important network.

If you have a story about the network, contact Jillian.Kelly@gov.bc.ca and it may appear in a future newsletter!

To download data, create your own charts, and view groundwater, hydrometric and snow stations, please visit the Real-Time Water Data tool at:

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

Do you have questions about the PGOWN?

Contact groundwater@gov.bc.ca

Learn more about the Provincial Groundwater Observation Well Network by using the **interactive map** available at:

<https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers/groundwater-observation-well-network/groundwater-level-data-interactive-map>

Closed-Loop Exchange Wells under the Groundwater Protection Regulation (GWPR): Sealing Closed-Loop Geexchange Wells

Under the GWPR sealing a closed-loop exchange well is described under Division 3 – Section 25 (1) and (2)

- (1) The person responsible for constructing a closed-loop geexchange well must seal the closed-loop geexchange well along the entire length of the ground loop, from the bottom upward, promptly after installing the ground loop.
- (2) The person responsible for converting an existing well into a closed-loop geexchange well must seal the closed-loop geexchange well the ground loop is in along the entire length of the ground loop, from the bottom upward, promptly after installing the ground loop.

Contact Information for Groundwater Staff with Statutory Designation

Office	Name	Statutory Designation	Phone	Email	Ministry
West Coast (Nanaimo)	Graeme Henderson	Officer	250-751-7119	Graeme.Henderson@gov.bc.ca	FLNRORD
	Sylvia Barroso, P. Geo.	Assistant Water Manager	250-751-3265	Sylvia.Barroso@gov.bc.ca	
	Jessica Doyle, P. Geo.	Assistant Water Manager	778-693-3035	Jessica.Doyle@gov.bc.ca	
South Coast (Surrey)	Emma Webster, P. Geo.	Officer	778-572-2160	Emma.Webster@gov.bc.ca	
	Michele Lepitre, P. Geo.	Assistant Water Manager	778-572-2168	Michele.Lepitre@gov.bc.ca	
	Shirley Wang, P. Geo.	Assistant Water Manager	778-572-2167	Shirley.Wang@gov.bc.ca	
South Area (Penticton)	Skye Thomson, P. Geo.	Assistant Water Manager	778-622-6907	Skye.Thomson@gov.bc.ca	
	John Pogson, P. Geo.	Assistant Water Manager	778-622-6876	John.Pogson@gov.bc.ca	
South Area (Vernon)	David Thomson, P. Geo.	Assistant Water Manager	778-943-6924	David.Thomson@gov.bc.ca	
South Area (Kamloops)	Laurie Lyons	Officer	250-312-7262	Laurie.Lyons@gov.bc.ca	
North Area (Smithers)	Johanna Wick, P. Geo.	Assistant Water Manager	778-693-2671	Johanna.Wick@gov.bc.ca	
North Area (Prince George)	Ed Bryson, P. Geo.	Officer	778-693-3177	Stuart.Bryson@gov.bc.ca	
Victoria	Amy Sloma, P. Eng.	Deputy Comptroller	778-698-4866	Amy.Sloma@gov.bc.ca	ENV
	Leia Fougere, P.Eng.	Officer (Sr. GW Data Specialist)	236-478-3730	Leia.Fougere@gov.bc.ca	
	Uelun Tuvshinjargal	Officer (GW Data Specialist)	236-478-0448	Uelun.Tuvshinjargal@gov.bc.ca	

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



**BRITISH
COLUMBIA**