

# Update on Groundwater

THIS REPORT IS PREPARED FOR YOU by the water management teams within the Ministry of Water, Land, and Resource Stewardship (WLRS) and the Ministry of Environment and Climate Change Strategy (ENV).

## IN THE MARCH 2024 ISSUE:

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## 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.

## GWELLS Well Record Submissions 2023

- Number of Well Records by Company
- \* Some 2023 paper well records are yet to be entered
- Companies with less than four records are not displayed



## Before You Drill

### Choosing a water well driller

The Water Sustainability Act (WSA) requires all drilled water supply wells and dug wells deeper than 15 m (50 ft) to be constructed by, or under the direct supervision of, a registered water well driller or a professional in the field of hydrogeology or geotechnical engineering. All wells must be constructed according to minimum specifications in the Groundwater Protection Regulation (GWPR). You can find a local registered [water well driller](#) or [professional](#) online. To ensure you have the right contractor for the job, talk to registered water well drillers or professionals in your area and find a company that complies with legislation (e.g. submits well construction logs) who can satisfy your needs.

### 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 WSA, you must:

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

## HAVE SUGGESTIONS FOR IMPROVEMENTS?

Do you have ideas on how the application can be improved? Email [gwells@gov.bc.ca](mailto:gwells@gov.bc.ca)

If you are not already listed on the [provincial registries](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/water-wells/application_for_registration_well_driller_and_well_pump_installer.pdf), 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](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).

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

2023 was a busy year for the South Coast Groundwater Team, which is now under the Ministry of Water, Land and Resource Stewardship Authorizations Branch. One theme of the year was hiring and onboarding new staff. Our team has grown to 17 permanent positions, and we look forward to a productive 2024 as staff continue to develop into their new roles.

### ***Groundwater Protection Regulation Compliance***

During the past year, the South Coast Groundwater Team received more than 45 inquiries, 17 new compliance and enforcement cases including several flowing artesian wells. The [RAPP Line](#) is the best way to report natural resource violations, and reports can be submitted anonymously.

Our Groundwater Protection Officer has observed an increase in complaints regarding well siting, particularly siting work completed by unregistered individuals marketing themselves as water dowsers. We advise the drilling community to be aware of their professional responsibilities and the regulatory obligations for well siting under both the [Groundwater Protection Regulation](#) and the [Health Hazard Regulation](#).

### ***Drought Response and Unauthorized Water Use***

Like many areas of BC, the South Coast Region experienced significant drought in summer 2023. The Lower Mainland, Sunshine Coast and Eastern Pacific Range areas reached drought level 5 for a sustained period. Some of the lowest stream flows on record were observed, particularly in the lower Fraser Valley. Our groundwater and surface water allocation teams worked together with our partner agencies to respond to the drought.

Drought response in the South Coast has focussed on addressing unauthorized use, rather than curtailing authorized water users. Our Unauthorized Use Project has thus far identified approximately 1600 likely unauthorized water users in 6 watersheds through a combination of GIS analysis and field verification. During the drought season, stop water use advisories (>400) and orders (27) were issued to unauthorized users in priority watersheds. In addition, over 6000 letters were sent to authorized water users across the region requesting voluntary reductions of water use by 50%.

So far, this has been a dry winter and groundwater levels across the Fraser Valley are persisting at [levels below their historic averages](#). With [low snowpacks](#) (approx. 35% of normal) and low groundwater levels, there is an increased chance of drought conditions occurring again next summer. We are currently focussing on proactive communication and outreach with water user groups and other organizations to raise awareness of drought, the WSA, and our approaches. We also continue to focus on unauthorized use and bringing water users into compliance with the WSA.

See the BC Drought Portal for further information.

<https://governmentofbc.maps.arcgis.com/apps/MapSeries/index.html?appid=838d533d8062411c820eef50b08f7ebc>

### ***Authorizations***

Housing is a new priority for the water authorizations team. Staff are supporting permitting solutions for the Provincial housing initiative. The groundwater authorizations team continues to have many applications in the queue. Both Provincial and Regional efforts are being made to work on licence applications and to streamline the processes, particularly for existing use applications.

### ***Groundwater Studies***

The Provincial Groundwater Science Program has kindly provided funding for several projects:



- Environmental Flow Needs Methodology for Tidally Influenced and Low Flow Streams: This 3-year project includes a MIKE SHE groundwater model for the lower Fraser Valley and is being conducted by Simon Fraser University (SFU).
- Preliminary Assessment of Hydraulic Connection and Stream Flow Depletion in Chilliwack: This 1-year project is being conducted by Western Water Associates to help quantify the potential impacts of groundwater pumping on connected streams.
- Aquifer Data Enhancement: initial work to correlate wells to aquifers in the Township of Langley is now published on the *Water Science Series* 2023-06: *Correlating Wells to Mapped Aquifers, Township of Langley, British Columbia*.
- Aquifer Remapping and Well Correlation in Bertand Creek, Fishtrap Creek and Little Campbell River: Building on the project above, a 3-year aquifer re-mapping project is underway in southern Langley and Abbotsford.

We are also partnered with SFU and the Pacific Institute of Climate Solutions (PICS) on a multi-year project titled “Drought and deluge: informed water allocation decision making in a world of intensifying hydrologic extremes”, which is located in the Blaney Creek/North Alouette Watersheds. This study focuses on developing water management decision-support tools to consider adaptation to climate extremes.

### **Provincial Groundwater Observation Network**

Lindsay Eenkooren started as our new Groundwater Technician in April 2023, after a period of vacancy. The past several months Lindsay has been working hard to catch up on the operation and maintenance of our large well network. This has included extensive battery replacements, decommissioning of well OW012 in Langley, data processing and validation, equipment updates, sampling, and new telemetry installations.

In October 2023, we welcomed Graeme Henderson in a new position as Groundwater Monitoring Specialist supporting the PGOWN program in both the South Coast and West Coast regions. Moving forward for 2024, Lindsay and Graeme will explore opportunities for network reduction through decommissioning of ineffective stations and opportunities for strategic network expansion.

Groundwater Level Data Interactive Map

<https://governmentofbc.maps.arcgis.com/apps/webappviewer/index.html?id=b53cb0bf3f6848e79d66ffd09b74f00d>

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 Observation Well Network (PGOWN) Update**

The Provincial Groundwater Observation Well Network (PGOWN) is currently entering a new phase in its operation with the hiring of additional dedicated staff and the implementation of new procedures to improve data quality and network operations.

A major task for the network in the months and years ahead is to deal with our aging infrastructure to ensure that stations continue to operate properly and generate high-quality groundwater level data. This includes replacing aging monitoring equipment (e.g., telemetry was first installed at network wells over ten years ago), as well as inspecting older wells to ensure the integrity of their well casings and screens. This may necessitate the rehabilitation or even replacement of some wells. There is a backlog of this work to catch up on which will be the target of the new program staff.

While this work is challenging, it is critical to make sure that the PGOWN continues to operate properly and meet our program objectives.



*Downhole camera inspection of an observation well showing screen biofouling (2020, WLRS).*

### **Do you have questions about the PGOWN?**

Contact [groundwater@gov.bc.ca](mailto: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>.



## Registering as a GWELLS user to submit well records online

### Get access in three easy steps:

1. Visit the GWELLS BCeID registration page to obtain either a Basic BCeID account or Business BCeID account. (Note, if you already have a Basic or Business BCeID account, you do not need to create a new one to access GWELLS)
2. After obtaining your BCeID, go to GWELLS and select the login button (top right of the application screen).
3. Once you have logged in, email [gwells@gov.bc.ca](mailto:gwells@gov.bc.ca) to request access for your BCeID user account.

**Once access has been granted, you will be able to enter and submit groundwater well reports through GWELLS.**

### Contact Information for Groundwater Staff with Statutory Designation

Office		Name	Statutory Designation	Phone	Email
West Coast	Nanaimo	Jessica Doyle, P. Geo.	Assistant Water Manager	778-693-3035	<a href="mailto:Jessica.Doyle@gov.bc.ca">Jessica.Doyle@gov.bc.ca</a>
		David van Everdingen, P. Geo.	Assistant Water Manager	250-739-8503	<a href="mailto:David.vanEverdingen@gov.bc.ca">David.vanEverdingen@gov.bc.ca</a>
		Nicole Fulcher	Officer	250-739-8339	<a href="mailto:Nicole.Fulcher@gov.bc.ca">Nicole.Fulcher@gov.bc.ca</a>
		Ashley Van Acken	Officer	250-739-8556	<a href="mailto:Ashley.VanAcken@gov.bc.ca">Ashley.VanAcken@gov.bc.ca</a>
South Coast	Surrey	Michele Lepitre, P. Geo.	Assistant Water Manager	778-572-2168	<a href="mailto:Michele.Lepitre@gov.bc.ca">Michele.Lepitre@gov.bc.ca</a>
		Elyse Sandl, P. Geo.	Assistant Water Manager	236-468-3876	<a href="mailto:Elyse.Sandl@gov.bc.ca">Elyse.Sandl@gov.bc.ca</a>
		Kumar K C	Officer	778-572-2162	<a href="mailto:Kumar.K.C@gov.bc.ca">Kumar.K.C@gov.bc.ca</a>
		Jeanette Klassen, P. Geo.	Officer	604-660-7369	<a href="mailto:Jeanette.klassen@gov.bc.ca">Jeanette.klassen@gov.bc.ca</a>
South Area	Penticton	John Pogson, P. Geo.	Assistant Water Manager	778-622-6876	<a href="mailto:John.Pogson@gov.bc.ca">John.Pogson@gov.bc.ca</a>
		Jeff Corrie	Officer	778-622-6973	<a href="mailto:Jeff.Corrie@gov.bc.ca">Jeff.Corrie@gov.bc.ca</a>
		Laura Maclaren	Officer	778-476-9008	<a href="mailto:Laura.Maclaren@gov.bc.ca">Laura.Maclaren@gov.bc.ca</a>
	Vernon	David Thomson, P. Geo.	Assistant Water Manager	778-943-6924	<a href="mailto:David.Thomson@gov.bc.ca">David.Thomson@gov.bc.ca</a>
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		Laurie Lyons	Officer	250-312-7262	<a href="mailto:Laurie.Lyons@gov.bc.ca">Laurie.Lyons@gov.bc.ca</a>
North Area	Prince George	Phillip Krauskopf	Assistant Water Manager	250-645-9433	<a href="mailto:Phillip.Krauskopf@gov.bc.ca">Phillip.Krauskopf@gov.bc.ca</a>
		Dave Francis	Water Manager	778-693-3208	<a href="mailto:Dave.Francis@gov.bc.ca">Dave.Francis@gov.bc.ca</a>
		Angela Smith-Rockwell	Assistant Water Manager	250-645-9303	<a href="mailto:Angela.SmithRockwell@gov.bc.ca">Angela.SmithRockwell@gov.bc.ca</a>
Victoria		Amy Sloma, P. Eng.	Deputy Comptroller	778-698-4866	<a href="mailto:Amy.Sloma@gov.bc.ca">Amy.Sloma@gov.bc.ca</a>
		QiuHong Su	Officer (Sr. GW Data Specialist)	778-693-2768	<a href="mailto:QiuHong.Su@gov.bc.ca">QiuHong.Su@gov.bc.ca</a>

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



BRITISH  
COLUMBIA