

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 Parks (ENV).

In the September 2025 issue:

- WLRS updates
- Before you drill
- Provincial Government Groundwater Program regional update
- Provincial Groundwater Observation Well Network update
- Registering as a GWELLS user to submit well records online
- 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.

WLRS updates

Improving access to source water information in B.C.

WLRS has been working closely with the Ministry of Health, Office of the Provincial Health Officer, regional health authorities and others to enhance information on drinking water systems and source water across British Columbia. With approximately 5,000 water systems in the province—most of which rely on groundwater—spatially documenting these systems and sources in a publicly accessible map is foundational for effective source water hazard assessment and management.

The new Provincial Drinking Water Sources Spatial Dataset integrates geographic data for drinking water supplies into a single, accessible map layer. It includes:

- Point locations representing drinking water intakes and wellheads, and
- Polygon outlines representing the protection zones surrounding these points, as well as the source areas that supply the associated intakes and wellheads

The first release of the provincial dataset will include approximately:

- 1,900 validated intake and wellhead points
- 860 protection zone polygons
- 300 source area polygons

Additional intake and wellhead points will continue to be added with the goal of

mapping all drinking water systems and their sources across the province. To support data accuracy, ongoing quality control efforts focus on resolving discrepancies between water system records that WLRS has received and the Ministry's GWELLS database. A dedicated contract is in place to cross-reference Well ID Plate Numbers and Well Tag Numbers between datasets. Further enhancements, such as the addition of more source protection zones, are also underway.

The data will be available for viewing through an online map and download through the [BC Data Catalogue](#) in September 2025.

4th Annual B.C. Groundwater Science Symposium, November 27, 2025

WLRS will host the 4th annual Provincial Groundwater Science Symposium on November 27, 2025. The online symposium will consist of a series of short presentations, highlighting current provincial groundwater research and monitoring projects, and will include a session dedicated to groundwater science in the Yukon territory.

Contact GroundWater@gov.bc.ca if you have any questions.

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

If you are not already listed on the **provincial registries**, 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).

Provincial Groundwater Program Regional update – South Natural Resource Area

2025 has been an active year for the South Area Groundwater Science Team. We are pleased to provide an update on groundwater activities carried out by groundwater staff in WLRs' South Natural Resource Area. The South Area includes the Cariboo, Thompson-Okanagan, and Kootenay-Boundary Regions.

Groundwater science

Drought support

South Area Groundwater Science continues to support the provincial drought response through a variety of site and watershed-scale activities. Those supports are focused within the Kootenay-Boundary and the Thompson-Okanagan Regions to provide timely updates on groundwater conditions and



inform the application of regulatory tools for managing water use in times of scarcity. Current drought conditions can be accessed through the **B.C. Drought Information Portal**.

Assessment of groundwater - surface water interactions on the Vaseux Creek Alluvial Fan, Oliver, B.C.

sn̓aḥ̓əlqax̓“iya? (Vaseux Creek) is a site of regular water scarcity-based conflict related to flow requirements for culturally significant fish species, human water use demands, and the current hydrological system. In partnership with the Okanagan Nation Alliance (ONA), this 3-year research project focused on groundwater/stream interactions across an alluvial fan within the traditional lands of the Osoyoos Indian Band (OIB). Increased understanding of the dynamics between groundwater and surface water will support effective water management on this site. The final report for this and other provincial groundwater science projects are available from the **Water Science Series** — a technical publication focusing on scientific reports that relate to the understanding and management of B.C.'s water resources.

Groundwater monitoring

The Provincial Groundwater Observation Well Network (PGOWN) is currently comprised of 238 active observation wells, 75 of which are located within the Cariboo, Thompson-Okanagan, and Kootenay-Boundary natural resource regions. The PGOWN wells monitor groundwater levels using pressure transducers that collect data hourly.

Nearly two-thirds of the observation wells in the PGOWN transmit real-time data via satellite telemetry.

PGOWN observation well (OW518) installed in the Westwold Valley is now equipped with satellite telemetry to provide real-time hourly water level data. Level data from OW518 and other observation wells in the PGOWN can be accessed

through the [Groundwater Level Data Interactive Map](#) or [Real-time Water Data Web Portal](#).



OW 518 Westfold Valley (2025, WLRS)

Groundwater samples collected from PGOWN wells are analyzed for nutrients, metals, general water chemistry, and increasingly stable hydrogen and oxygen isotopes. Results are publicly available in the [Environmental Monitoring System \(EMS\) database](#). The latest EMS water chemistry results for PGOWN wells can be easily accessed via a link on the [Groundwater Level Data Interactive Map](#).

Satellite telemetry installation at PGOWN observation well OW401 near Osoyoos is scheduled for the fall 2025. PGOWN operations will prioritize improvements to data quality and availability through maintenance, updating aging telemetry infrastructure and well replacement or decommissioning where appropriate. The PGOWN in South Area is operated by one full-time Groundwater Technician and one part-time Groundwater Technician.

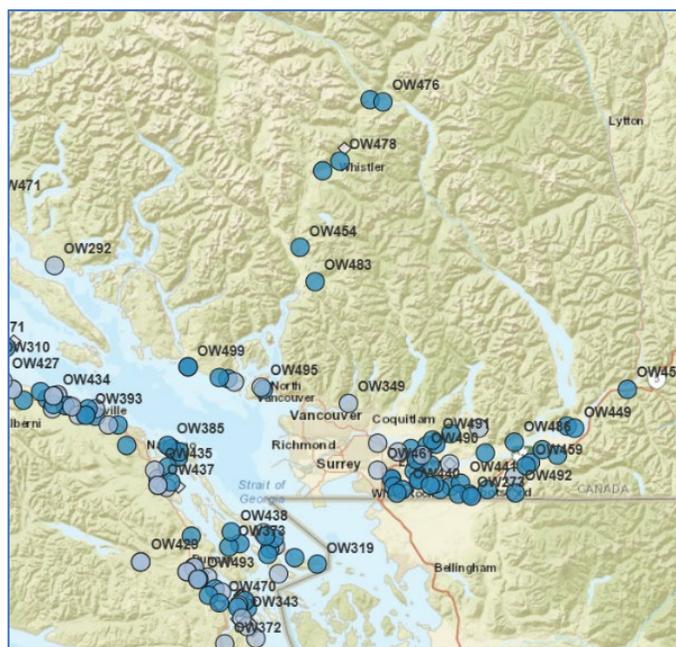
Groundwater protection and regulatory compliance

Water well construction, operation and maintenance can have a direct impact on water availability and quality. South Area staff continue to provide timely responses to complaints and inquiries related to groundwater and wells. Groundwater protection officers have responded to problems related to well construction and poor maintenance, improper well siting, uncontrolled flowing artesian conditions from directional drilling for utilities and from water wells, work completed by under qualified or non-registered practitioners and failure to submit well construction records. Ministry staff continue to work with industry professionals and collaborate with Interior Health staff, Environmental Protection Officers and Natural Resource Officers on groundwater-related issues requiring a multi-jurisdictional assessment.

Provincial Groundwater Observation Well Network update

The PGOWN has operated for nearly 65 years and has included over 500 observation wells across the province, nearly 240 of which are currently active and collecting hourly groundwater level measurements. These observation wells are monitoring over 180 aquifers of importance to their communities.

To improve the utility and access to data, two-thirds of the network is equipped with telemetry. This allows for the daily transmission of groundwater level data to our publicly accessible database and associated web portals. The most central of these websites is the [Groundwater Level Data Interactive Map](#) which maps all PGOWN stations with publicized data. This includes their construction records, groundwater level charts, chemistry data, percentiles for drought monitoring, and much more. To download and plot PGOWN groundwater level data, along with data from other monitoring stations (surface water and snow), the [Real-time Water Data Tool](#) is recommended.



Groundwater Level Data Interactive Map
(Environmental Protection Division, ENV, 2025)

Data quality is of utmost importance for the PGOWN program and will be the primary focus in the years ahead as we best determine how to utilize our limited resources. This is to ensure the reliability of the data for water managers and external stakeholders to properly understand this underground and unseen, but critical, resource.

Do you have questions about the PGOWN?

Contact GroundWater@gov.bc.ca

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 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.

Information for groundwater staff with statutory authority

Office		Name	Statutory designation	Phone	Email
West Coast	Nanaimo	Jessica Doyle, P. Geo.	Assistant Water Manager	778-693-3035	Jessica.Doyle@gov.bc.ca
		Nicole Fulcher	Officer	250-739-8339	Nicole.Fulcher@gov.bc.ca
		Colin McKenzie, P. Geo.	Officer	250-331-4455	Colin.McKenzie@gov.bc.ca
South Coast	Surrey	Michele Lepitre, P. Geo.	Assistant Water Manager	778-572-2168	Michele.Lepitre@gov.bc.ca
		Elyse Sandl, P. Geo.	Assistant Water Manager	236-468-3876	Elyse.Sandl@gov.bc.ca
		Kumar K C	Officer	778-572-2162	Kumar.K.C@gov.bc.ca
South Area	Penticton	John Pogson, P. Geo.	Assistant Water Manager	778-622-6876	John.Pogson@gov.bc.ca
		Jeff Corrie	Officer	778-622-6973	Jeff.Corrie@gov.bc.ca
		Laura Maclaren	Officer	778-476-9008	Laura.Maclaren@gov.bc.ca
	Vernon	David Thomson, P. Geo.	Assistant Water Manager	778-943-6924	David.Thomson@gov.bc.ca
	Kamloops	Melissa Wade, P. Geo.	Assistant Water Manager	778-362-4714	Melissa.Wade@gov.bc.ca
		Laurie Lyons	Officer	250-312-7262	Laurie.Lyons@gov.bc.ca
Stephanie Drake, P. Eng.		Assistant Water Manager	236-425-9263	Stephanie.Drake@gov.bc.ca	
North Area	Prince George	Jun Yin, P. Geo.	Assistant Water Manager	778-693-3015	Jun.Yin@gov.bc.ca
	Smithers	Johanna Wick, P. Geo.	Assistant Water Manager	778-693-2671	Johanna.Wick@gov.bc.ca
Victoria		Amy Sloma, P. Eng.	Deputy Comptroller	778-698-4866	Amy.Sloma@gov.bc.ca
		Qihong Su	Officer (Sr. Groundwater Data Specialist)	778-693-2768	Qihong.Su@gov.bc.ca
		Alexander Roudenko	Officer (Groundwater Data Specialist)	250-387-3944	Alexander.Roudenko@gov.bc.ca

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



**BRITISH
COLUMBIA**