

The SCR D is committed to providing drinking water which exceeds regulatory requirements. We take pride in serving the needs of our community while meeting the challenges of water supply and protection, community outreach and education, water conservation, and new regulations.

Sunshine Coast Regional District text

2022 Utility Services Annual Report



The following 2022 Utility Services Annual Report covers the period between January 1, 2022 and December 31, 2022.

Sunshine Coast Water Systems

Water Supply

The Sunshine Coast Regional District (SCRD) supplies water to approximately 24,000 residents from Langdale to Earls Cove, which are located within the traditional territories of the *shíshálh* and Skwxwu7mesh First Nations. Water is supplied for drinking, fire protection, recreation (pools and ice rinks), industry, and irrigation. This involves the operation and maintenance of the Langdale, Soames, Grantham's Landing, Eastbourne (Keats Island), Chapman Creek, South Pender Harbour, Cove Cay, Egmont and North Pender Harbour Water Systems.

Combined, the SCRD Water Systems consist of over 382 km of watermains, 16 storage reservoirs, 10 pump stations, 29 pressure reducing valve stations, 1462 fire hydrants, 4 re-chlorination stations, 11 water treatment facilities and approximately 11,555 water connections.

Regional Water

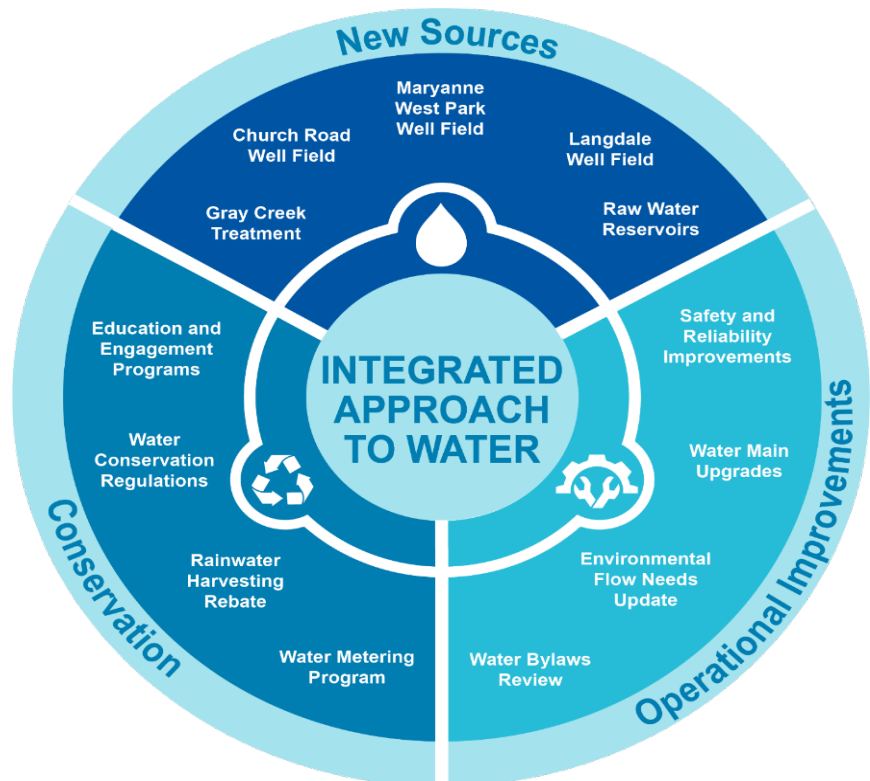
- Supplies over 90% of Sunshine Coast's water users within the regional water service area
- Systems within the regional water service area include Langdale, Granthams, Soames Point, Cove Cay, Egmont, and Chapman
- Sources include Chapman Lake, Edwards Lake and Gray Creek for the Chapman system, Waugh Lake for Egmont, Ruby Lake for Cove Cay with Langdale and Soames Point supplied by their own wells

North Pender Harbour Water

- Independent system, operated and maintained by the SCRD since 2007
- Source for this system is Garden Bay Lake
- Secondary source for this system is Hotel Lake, for emergency use only

South Pender Harbour Water

- Independent system, operated and maintained by the SCRD since 2008
- Source for this system is McNeill Lake which is supplied water from Harris Lake



Health and Safety

2022 Emergency Operations Centre and State of Local Emergency



As a result of continued drought during the summer of 2022, the SCRCD activated its Emergency Operations Centre (EOC) at the end of September.

Siphons were operational at Chapman Lake since Stage 4 Water Conservation began at the end of August. With lake levels at a record low, siphons were transporting water 200 meters between the lake and the dam.

In early October, siphons were installed at Edwards Lake to supplement water from Chapman Lake for the community.

In mid-October, the SCRCD ordered a State of Local Emergency (SOLE) due to the ongoing drought period and risk to water supply for users on the Chapman Water System. The District of Sechelt and the shishálh Nation also ordered a SOLE.

To increase our community water supply, the Town of Gibsons offered to provide the SCRCD with up to one-million litres of water per day.

In mid-November, the SOLE was cancelled.



Due to over 100 days of drought, followed by immediate freezing at our main water sources, Stage 4 regulations remained in place until the middle of December. While November rainfall contributed to the immediate supply, freezing conditions at Chapman and Edwards Lake put longer term supply at risk.

SCRCD declared an end to Stage 4 water conservation regulations and a return to Stage 1 for water users on the Chapman Water System on December 13, 2022, after travelling to Chapman Lake and finding that there was now a limited amount of water flowing over the dam.

Water Quality Monitoring



Sampling

Bacteriological samples are taken weekly from sites throughout SCRD water systems.

Samples are analyzed for total coliforms and E.coli coliforms at a Provincial Laboratory in Vancouver with results sent to the SCRD Utility Services Division and the Vancouver Coastal Health Office.

A positive sample result of total coliforms indicates bacterial presence. A positive E.coli sample result indicates bacterial presence from

human or animal fecal matter. A sampling error can contaminate samples causing positive coliform results. In the event of a positive sample result, technicians' re-sample the site to ensure water potability. The SCRD collects semi-annual samples which are analyzed for metals, physical, chemical and organic parameters and collects quarterly samples which are analyzed for disinfection byproducts which can be created when water is chlorinated.

2022 Results

All sample results from weekly, semi-annual and quarterly sampling from all systems are compiled and compared with the Guidelines for Canadian Drinking Water Quality. More detailed results can be found on the website at www.scrd.ca/quality.

Vancouver Coastal Health (VCH) conducted annual inspections and all the SCRD water facilities passed with no violations to their operating permits.

Sample Location	Samples Collected	Coliform Positives	E.coli Positives
Cove Cay	76	0	0
Eastbourne	119	0	0
Egmont	100	0	0
Chapman	630	2	0
Grantham's Landing	26	0	0
North Pender Harbour	177	1	0
Soames	78	0	0
South Pender Harbour	181	1	0
Langdale	78	0	0
Totals	1465	4	0

A total of 1465 total coliform and E. coli samples were collected throughout the Sunshine Coast water distribution systems. The frequency of sampling met the requirements for the permit conditions and the Drinking Water Protection Regulations. Of the 1465 samples tested, 4 of them tested positive for total coliforms and 0 of them tested positive for E.coli. The 4 samples that tested positive for total coliforms were re-sampled and re-analyzed resulting in no coliform presence.

System Improvements



Church Road Well Project

Construction began on the combination water treatment plant and pump station along with the other connected infrastructure.

The Church Road Well Field will draw water from Aquifer 560 year-round, making it another primary source of water. It will also allow the Granthams Landing and Soames Point Water Systems to supplement the Chapman Water System.

This project will add up to 4.6 million litres of water per day to the Chapman Water System and is due for completion in 2023.

Vital Watermain Replacement in Secret Cove

The marine crossing watermain between Wescan Road and the Sans Souci boat launch was replaced.

A repair clamp that was placed on the old watermain in 2020 was nearing the end of its effectiveness. By replacing the water main, it ensured safe and reliable water and fire protection for all residents on the north side of Secret Cove and eliminated a section of the watermain on private property.



Development of a SCRD Water Strategy

The SCRD is developing a Water Strategy that will set the direction and priority for drinking water initiatives for the next five years and will seek to ensure water supply needs are met until 2050.

The Water Strategy will set long-term goals for the SCRD water systems and staff will develop a plan to achieve them. The strategy will include a commitment statement, guiding principles, focus areas, with associated tactics and objectives.



Chapman Creek Water Treatment Plant (CCWTP) Onsite Generation of Sodium Hypochlorite

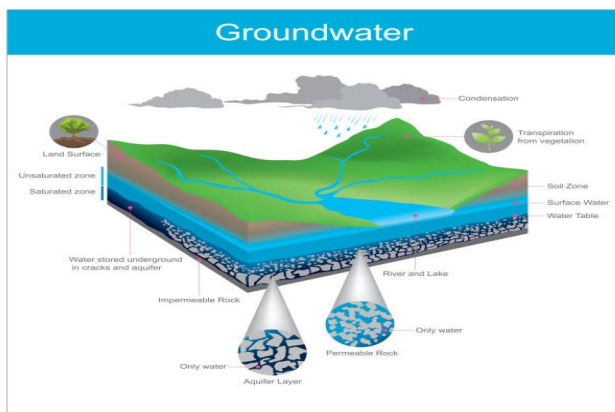
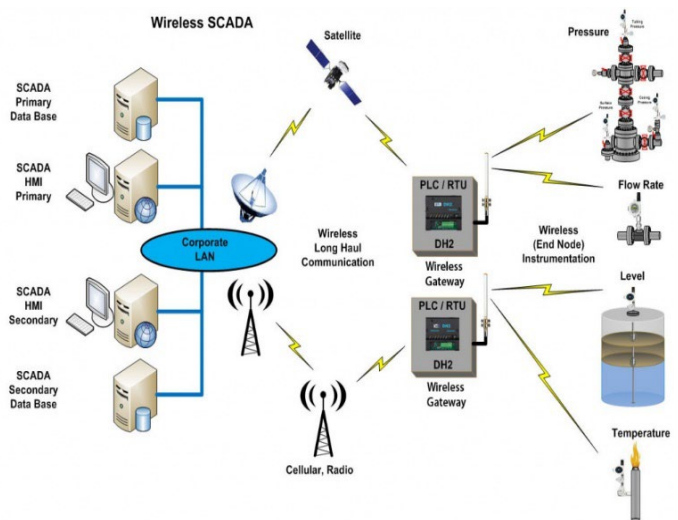
The CCWTP uses chlorine for disinfection of our drinking water. The CCWTP was designed to use Chlorine gas as a disinfectant but is nearing completion of an onsite sodium hypochlorite generation system. This will replace the current chlorine gas system and will be the largest upgrade at the water plant since initial construction in 2003.

This upgrade will eliminate safety concerns with chlorine gas. 2022 brought us closer to completion of this project with the installation of new tanks outside the plant and the structure completed to house these tanks. Also, an onsite generation reactor, piping, pumps, tanks and a ventilation system was installed inside the plant.

Updated Communications for SCADA

Supervisory Control and Data Acquisition (SCADA) is a control system that allows remote communication, monitoring and control of processes and equipment such as sensors, valves, pumps, motors and more. The system allows us to control the water systems locally and remotely and receive alarms from each location in real time.

In 2022 the SCR D upgraded part of the SCADA system hardware by installing SCADADroids. The SCADADroids are remote access alarm dialers, which allow for improved alarm notification from each site location.



Eastbourne Groundwater Investigations

The Eastbourne Water System is located on Keats Island and serves about 170 properties. It is generally at Stage 4 Water Conservation Regulations through the summer months.

The SCR D is exploring new sources to increase water supply. Three new test wells were drilled in November 2022 with pump stress water tests to commence in 2023.

Isolation Valve at Selma 1

An isolation valve was replaced in May 2022 for the Regional Water Systems main reservoir for pressure zone 1. Staff completed the work through the night minimizing impact on users.

The control valve that allows the reservoir to automatically fill requires upgrading and this new isolation valve will allow staff to safely work on the upgrade.



Sharing Water between Town of Gibsons (TOG) and the SCRD

The TOG and SCRD worked together in June 2022 to complete a series of trials on each water system to facilitate sharing water with one another.

The SCRD has always had the capability to automatically provide TOG Zone 3 with water when needed, for daily use and fire protection. It was uncertain how the two systems would perform under other scenarios, so tests were completed to ensure proper flow and pressures in the event water sharing between the two systems was required. All tests were successful, and parameters are now in place for any future needs.

Langdale Well Field Expansion

The SCRD operates a groundwater well in Electoral Area F (West Howe Sound), near the Langdale Ferry Terminal which services the Langdale area. In 2017, groundwater studies identified the potential to draw more groundwater from this aquifer source sustainably.

In 2022, the SCRD drilled two new production wells after confirming that the aquifer meets the SCRD's water quantity and quality requirements. The result from the wells has been favourable, and the SCRD will soon begin the water license application process.



Let's Talk Water

Leaks

If water is leaking outside of private property or is coming out of the water service connection, contact the Emergency Water Answering Service at 1-866-291-4645. If water is leaking inside the property line it is the homeowner's responsibility to repair the leak. The SCRD does not work on private property. Any other water concerns can be reported by calling the SCRD at 604-885-6895



What is the SCRD currently doing to increase water supply?

1. Watermain Replacement: Ongoing to replace old and undersized watermains throughout the region to improve fire protection, water quality, and overall system efficiency.
2. Universal Water Metering: In the final stages of installing water meters at all residential properties serviced by SCRD water systems. Water meters play a key role in ensuring a safe and reliable water supply for the community.
3. Groundwater Investigation: Actively seeking new groundwater source options to supplement water supply to the Chapman Water System.
4. Raw Water Reservoirs: Currently conducting a geotechnical investigation to confirm the feasibility of developing a raw water reservoir to store water from Chapman Creek in the winter to be used in the dry summer months.

Changes to Water Conservation Regulations in 2022

At the March 24 Regular Board meeting, the Sunshine Coast Regional District (SCRD) Board adopted changes to the Drought Response Plan (Bylaw 422).

Changes approved by the Board include:

1. Permits for watering new lawns are no longer available. These permits allowed for watering beyond authorized times and resulted in higher water use. There is no lawn watering in Stage 2 and above.
2. Hand-watering and drip-irrigation at Stages 2 and 3 is limited to mornings and evenings to reduce evaporation and the amount of water use that occurs when no limits are in place.
3. A new definition for "drip-irrigation system" was added to exclude less efficient technologies like micro-irrigation.
4. A two-week exemption for farms paying a metered rate for water at the start of Stage 4 (severe). All other outdoor water use is prohibited in Stage 4.

Want More Information?

Visit the SCRD Public Website and browse our Water Services pages	https://www.scrd.ca/Water
Visit the SCRD Let's Talk Water page	https://letstalk.scrd.ca/water
Check out information on the Water Supply Advisory Committee	https://www.scrd.ca/wasac
Call the SCRD Water Services Division	604-885-6895