

# CHAPMAN WATER SYSTEM BACKGROUNDER



## CONTEXT

The Chapman Water System supplies water to Electoral Areas B (Halfmoon Bay), D (Roberts Creek), E (Elphinstone), F (West Howe Sound), District of Sechelt, and shíshálh Nation. Approximately 83% of residential water users serviced by SCRD drinking water are on the Chapman Water System. This water system is located on the territory of the shíshálh Nation and Sk̓wxwú7mesh Úxwumixw.

## WATER SOURCE

The Chapman Water System has several water sources, including Chapman Creek (fed by Chapman and Edwards Lakes), Gray Creek, and Aquifer 560. The primary year-round water supply sources are Chapman Creek and Aquifer 560. Gray Creek is a secondary source that supplies additional water to the system during the summer months when demand is high. Three emergency sources only supply water during emergency situations, the Chapman Lake siphon system, Edwards Lake, and Trout Lake. The Chapman Water System is largely dependent on precipitation and snowmelt during the year to maintain sufficient water supply in Chapman Creek. In 2023, the Church Road Well Field was completed and connected the Granthams Landing and Soames Point Water Systems to the Chapman Water System.

### Chapman Creek

Chapman Creek is 27 kilometers (km) in length, stretching from the headwaters at Chapman Lake in Tetrahedron Provincial Park to the Salish Sea at Mission Point Park in Davis Bay. Chapman Lake is approximately 976 m above sea level, is 34 ha in size and has a storage capacity of 680 million litres (L). The Chapman Creek watershed is approximately 7,150 hectares (ha) in size. Edwards Lake and Gray Creek are in the Gray Creek Watershed, however water from Edwards Lake is diverted into the Chapman Creek watershed to augment Chapman Creek flow during periods of drought and high community water demand.

Water diverted from Chapman Creek flows to the Chapman Water Treatment Plant. After being treated, water is stored in a large reservoir, where it is then gravity fed to other reservoirs and water users.

Low water flows in Chapman Creek during emergency drought conditions are augmented through additional water released from Chapman Lake via a siphon system, and Edwards Lake through a controlled dam and siphon. Water from these emergency sources is only used when Stage 4 Water Conservation Regulations are declared.

### Gray Creek

Gray Creek flows from its headwater in Tetrahedron Provincial Park to the Sechelt Inlet north of Naylor Road, between the communities of Sandy Hook and Tuwanek. Water from Gray Creek is chlorinated at the pump station. Gray Creek is a secondary water source that is only used during times of drought and high demand, and requires approval from Vancouver Coastal Health to ensure water quality standards are met.



## FAST FACTS

### Primary Water Source:

Chapman Creek, Aquifer 560

### Number of Active Connections:

10,600

### Total Water Distributed:

4.2 billion litres/year

**Aquifer 560**  
**(Chaster Well, Church Road Well Field)**  
Aquifer 560 is the water source for Chaster Well and the Church Road Well Field. The aquifer extends from the base of Mount Elphinstone to the west, and along the coastline from north of Langdale to the south of Elphinstone.

**Trout Lake**  
Trout Lake is located in Electoral Area B (Halfmoon Bay), along Highway 101. The lake has not been used as a water source for many years. Trout Lake infrastructure would require significant improvements before drinking water could be distributed from this source.

SUPPLY INFRASTRUCTURE

The Chapman Water System provides potable water to approximately 10,600 active service connections including businesses, industry, farms, and institutions. The water system infrastructure currently consists of five production wells, two water treatment facilities, 11 reservoirs, pump stations, watermain, fire hydrants, and residential water meters in the Electoral Areas. In 2025 water meters will be installed on all service connections in the Regional Water Service.

**Chapman Creek Water Treatment Plant**  
In 2004, the Chapman Creek Water Treatment Plant was completed. The facility generally processes and distributes an average of 343 million litres of water each month. In 2021, the Chapman Water Treatment Plant produced 4.1 billion litres of drinking water.

**Gray Creek Water Treatment Plant**  
The SCRD is currently looking into the feasibility of upgrading the Gray Creek Water Treatment Plant. A multi-year hydrological study is underway to gather creek flow data, update watershed modelling, and assess the viability of the source through a climate change lens. In 2021, Gray Creek produced just over 102 million litres of drinking water, primarily during the summer months.



**Church Road Well**  
Church Road Well Field and water treatment facility contribute to the Chapman Water System. The well field uses three wells to provide year-round water supply from Aquifer 560.

**Chaster Well**  
Chaster Well is located near Cedar Grove Elementary School, off Chaster Road and draws water from Aquifer 560. The well and a small chlorination station became operational in 2003 and supplies water during the summer to help meet peak demand. In 2021, Chaster Well produced 79 million litres of treated drinking water.

FUNCTIONALITY

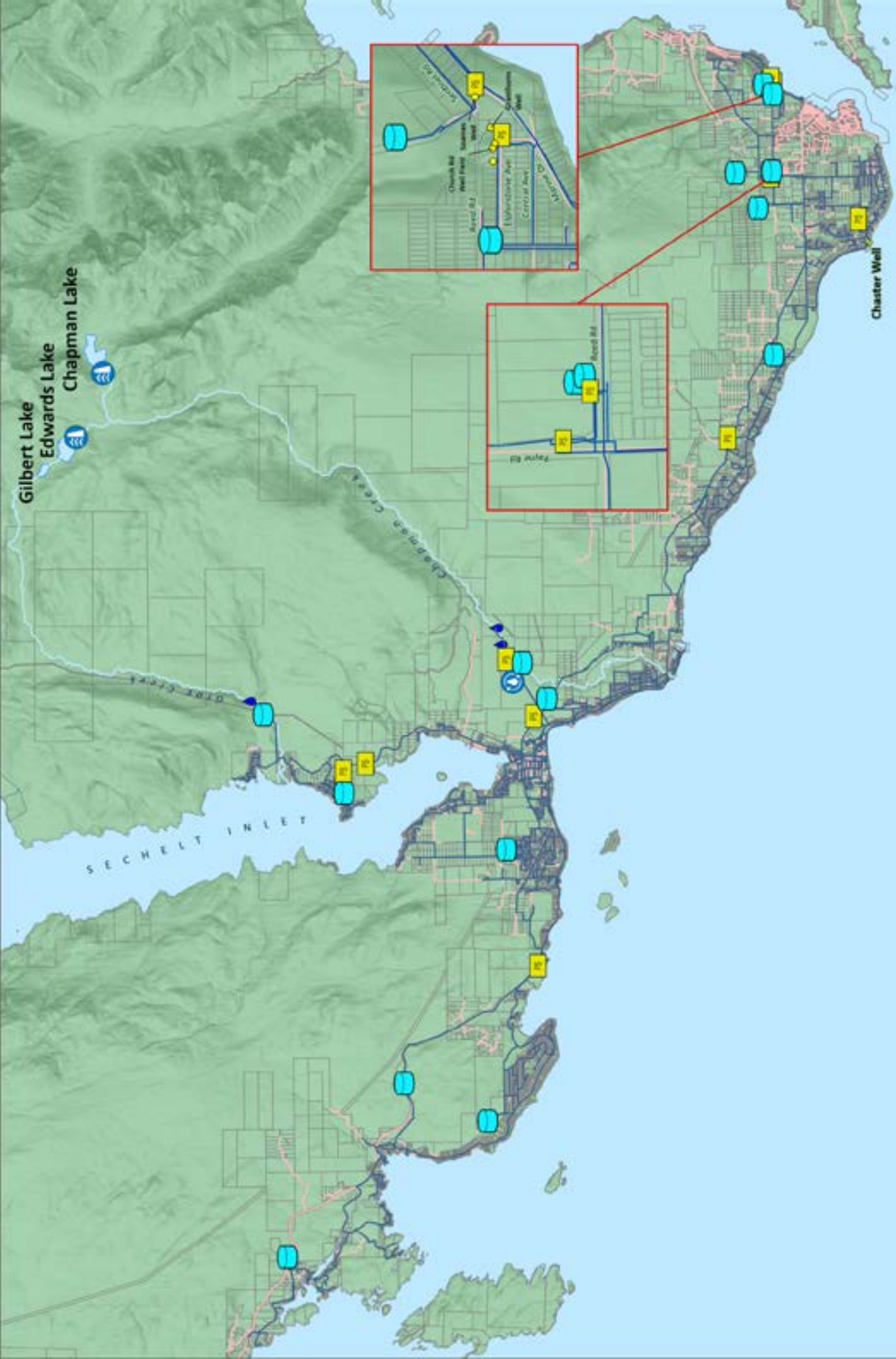
Household water use in the SCRD fluctuates significantly throughout the year. Within the summer months, the current water supply system does not meet community demand. Water Conservation Regulations are in effect from May 1 to September 30 each year, and in recent years, have been escalated to Stage 4, a ban on outdoor water use.

The SCRD is working on numerous water projects that aim to add additional water supply, improve water efficiency and increase resiliency of the current water sources.

To learn more about water supply projects that will continue to increase water supply and better serve local residents and businesses, please visit [letstalk.scrd.ca/water](https://letstalk.scrd.ca/water)







## Chapman Water System Infrastructure

