

# NORTH PENDER HARBOUR WATER SYSTEM BACKGROUNDER



## CONTEXT

The North Pender Harbour (NPH) Water System is in the northern part of the Sunshine Coast Regional District (SCRD), within Electoral Area A (Egmont/ Pender Harbour). The system provides water to properties in Garden Bay, Irvine's Landing, Daniel Point, and Sakinaw Ridge. This water system is located on the territory of the shíshálh Nation. In 2006, the SCRCD assumed ownership of the NPH Water System.

The NPH Water System is a separate Water Service Area with its own budget and water rates. It is one of nine independent water systems within the SCRCD, and is not connected to any other water systems.

## WATER SOURCE

The NPH Water System has both a primary and emergency water source. Garden Bay Lake is the primary water source for the system. The lake has a surface area of approximately 62 hectares, with a maximum depth of 52 metres. Garden Bay lake flows into Katherine and Sakinaw Lakes before reaching the ocean. The Garden Bay Watershed provides water to Garden Bay Lake, and includes the northwest side of Mt. Daniel and the east face of Harbour Peak. Hotel Lake is an emergency source for this system that is not currently needed or used. Significant infrastructure improvements would be required to treat and distribute this water from Hotel Lake for drinking water use.

## SUPPLY INFRASTRUCTURE

The NPH Water System provides potable water to approximately 583 water service connections including residents, businesses, farms, and institutions. The system consists of a water treatment plant, one pump station, six pressure reducing stations, one re-chlorination station, three reservoirs, 25 km of watermains, 150 hydrants, and residential water meters.

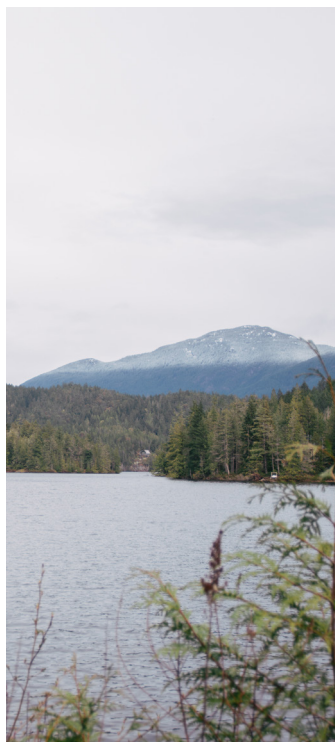
Water from Garden Bay Lake is pumped from the lake through an ultraviolet disinfection system and is then chlorinated to sterilize and kill bacteria and viruses.

Treated water is stored in the Garden Bay or Daniel Point Reservoirs, which hold 260,000 litres (L) and 460,000 L respectively. In 2021, Garden Bay Lake provided 241 million L of water, with the average North Pender water user using 534 L per day.

System upgrades began in 2019. The SCRCD will be developing a water model for all water systems that will analyze system capacity, working pressures, fire flow availability, and source and system redundancy, and identify associated upgrades if required. In North Pender Harbour, these upgrades could include watermain replacements and water treatment plant filtration upgrades.

## FUNCTIONALITY

The NPH Water System is currently operating within its designed capacity set out by the current water licences. The system is subject to raw water quality fluctuations due to the lake turnover events. The number of warm weather increases the number of lake turnover events, which mixes lake bottom sediments into the water, increasing turbidity and resulting in discolouration. Lake turnover is the result of changing temperatures and may be more common with climate change.



## FAST FACTS

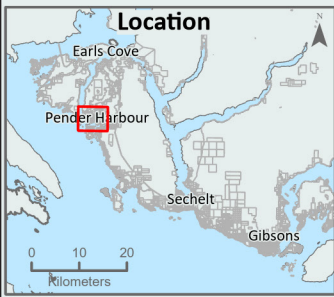
**Water Source:**  
Garden Bay Lake

**Number of Connections:**  
583

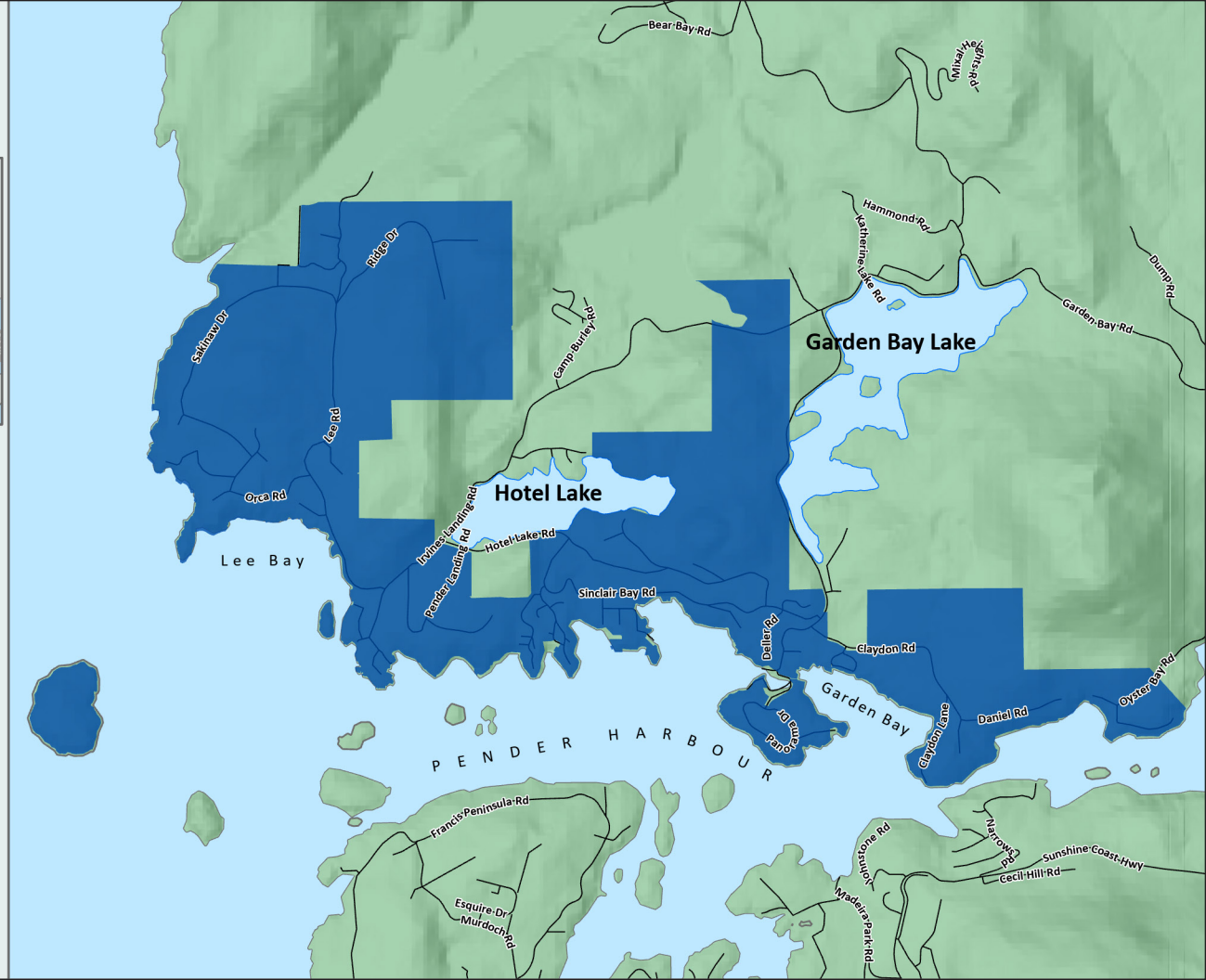
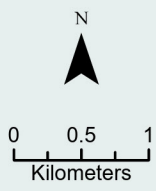
**Total Water Distributed:**  
60,736,000L per year

**Average Daily Household use:**  
534 Litres per day

# Context Map North Pender Harbour



- North Pender Harbour Water Service Area
- Water Source Lake
- Roads



## North Pender Harbour Water System Infrastructure

- Pump Station
- Reservoir
- Water Intake
- Water Main
- Water Source Lake
- Road
- Property Boundary

