

### 3. Existing Waterworks Systems

The Southern Region has 56 small community water systems monitored by the local Vancouver Coastal Health Agency. The eight main water systems are:

- Myrtle Pond Improvement District
- Stella Maris Estates
- Woodlyn Improvement District
- Pinetree Place Improvement District
- Brew Bay Improvement District
- Lang Bay Water Users Community
- Stillwater Waterworks Improvement District
- Saltery Bay Improvement District

Recent surveys have indicated that there is approximately 272 individual wells (1 connection) in addition to the 56 small community water systems.

The main water systems are further discussed in the following sections.

#### 3.1 Southern Region Water Supply Study – Phase I

In 2006, Kerr Wood Leidel (KWL) completed a Phase I study of the water systems in the Southern Region to better understand what and where problems existed. This provided a basis for resolving issues in a proactive and cost effective manner. The review consisted primarily of a survey of non community well water systems. The results are provided in Appendix A.

The results for the two key questions for the Southern Region can be summarized as follows:

- 55 percent of all respondents with wells have water that meets health standards; and,
- 77 percent of all respondents with wells have sufficient water quantity

Based on the above, although there may be localized concerns with the quantity of well water from individual wells, there is generally a majority overall satisfaction with adequacy of supply. From a public health perspective and regional perspective, the number of opinions expressed by residents that cannot confirm that their well water meets health standards is a significant concern.

Although there is no regulatory requirement that governs individual wells, community water systems (greater than one connection) are required to meet legislated standards. The existence of many individual wells that do not meet health standards is typically the initiating point for consolidation of these systems and the creation of larger local water systems.

From a regional perspective, the survey indicated approximately 23 percent of the survey respondents have insufficient water supply to meet their needs. 45 percent of the respondents have water that does not meet, or they are unsure their water meets health standards.

A number of options were identified to address the issue:

- Expand existing community water systems
- Develop new wells and community water systems
- Expand the City of Powell River system

Initially, it was envisioned that several of the existing water systems could be reasonably expanded. They would be operated locally by the owner, or alternatively, transferred to the Regional District for oversight, management and operation. A significant impediment for expansion of private water systems is the inability of the private operators to access grants for planning and capital improvements. Prior to the District undertaking oversight and operation of existing water systems, it was recommended the District undertake water system assessments to determine compliance with the Drinking Water Protection Act and Drinking Water Regulations.

Subsequent to the Phase I Study, the Regional District completed an assessment of the Myrtle Pond water system and an assessment was undertaken for the Stillwater water system.

### 3.2 Myrtle Pond Water System

In July 2005, KWL completed an assessment and study of the Myrtle Pond Water System. The water system is operated by the PRRD and serves approximately 45 users from a well constructed in 1993, which pumps into an existing steel reservoir which then supplies the water distribution system.

Analysis of the water indicated the supply met Guidelines for Canadian Drinking Water Quality (GCDWQ) for health based parameters except Trihalomethanes. Some aesthetic parameters were not met which include pH, colour, and hydrogen sulphide. The hydrogen sulphide has been effectively treated since 1999. Because of the high colour content of the water, the secondary disinfection is not used over concern with production of disinfection by-products (THM's).

Another concern is the rapid decrease in the static water level of Well W-93 which is the supply for Myrtle Pond. The drop is almost 46 m, which indicates that the current demand of the water system is exceeding the capacity of the aquifer. Therefore addition of further users to the system has not been approved by the PRRD. The per capita water consumption for maximum day demand is 1,977 lpcpd to 2,470 lpcpd. This indicates significant leaks in the distribution system and/or excessive waste by water users.

A number of immediate, short term, and long term needs were identified and a feasibility cost estimate was developed as follows:

