



Making a difference...together

**SURFSIDE PARK ESTATES WATER SERVICE
ANNUAL REPORT ON OPERATIONS
MAY 11, 2010**

The following is provided for information to residents and users of the Surfside Park Estates water service.

Operations and Projects

The Surfside water system has operated reliably and within budget in the past year. Aside from routine operation and maintenance by contract operator Jean Beaudet, work on the system has included several leak repairs in the distribution system, decommissioning of Well 74-1A, and various work on service connections.

CRD crews have located and repaired several leaks or breaks in the Surfside watermain in the past year:

- In response to an increase in water production in September 2009, a CRD crew was dispatched to investigate a significant distribution leak. Isolation valves were added to watermain in an effort to locate the leak; however it could not be located or repaired at the time.
- Water loss continued to increase in October and November, prompting a more rigorous investigation in December. On December 14, a watermain broke, causing a water service outage for approximately half of the service area. The break was repaired within a few hours, and service was restored to all customers. However, the repair did not resolve the growing water loss problem.
- On December 17, a significant leak was discovered near a hydrant at 371 Wood Dale. Isolating the hydrant reduced the loss rate, but significant water losses continued.
- In April 2010, distribution losses again sharply increased, effectively doubling the water production rate between April 12 and April 30. On May 3, a substantial leak was located near a pressure reducing station. The leak was promptly repaired, and water losses have been virtually eliminated by the repair.

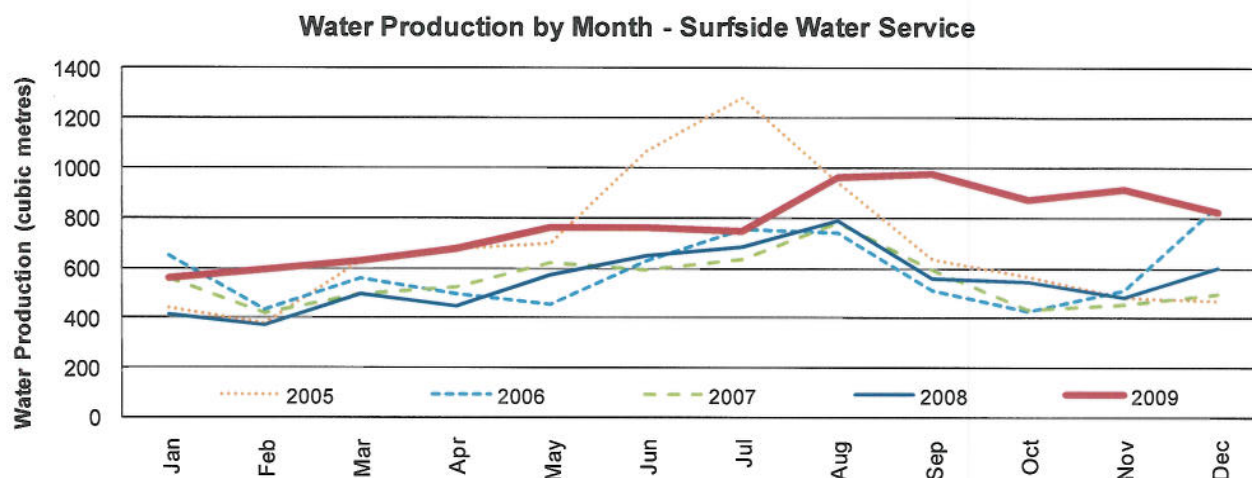
One result of the higher than normal flows has been accelerated depletion of the arsenic adsorption media used in the water treatment process. The media required replacement on May 8, 2010 in order to maintain arsenic below the Canadian Drinking Water Quality Guideline of 10 micrograms per litre.

Three capital projects were planned for 2010 in the annual budget for the Surfside water service. The decommissioning of Well #74-1A and restoration of the site has been completed, and a backwash tank control float will be added. The total cost of these two projects will not exceed \$8,000, and will be funded from the remainder of the original capital upgrade project funding. Due to the unplanned costs of leak detection and repair work in 2010 to date, staff will discuss with the Surfside Park Estates Water Service Committee alternatives for reducing the estimated \$12,000 cost of watermain and isolation valve work planned for later this year, which was to be funded from reserves.

Water Supply and Demand

A total of 9,276 cubic metres (m^3) of water was abstracted from the Surfside well in 2009, a 40% increase from 2008 that reflects the water distribution losses only recently resolved. Water production by month is shown in Figure 1. Total water demand in the Surfside service area in 2009 was 4,853 m^3 based on metered usage, nearly identical to 2008. The difference between measured water supply and demand, called non-revenue water, is partly related to the water requirement to backwash filters (estimated to be 170 m^3 /year), with the remainder likely associated primarily with leakage losses in the distribution system. Water demand per active service connection in the Surfside was 78 m^3 in 2009.

Figure 1. Water Consumption 2005-present



Water Quality

The CRD contractor carries out an annual sampling program including programmed testing of bacterial indicators, and twice annual sample for metals and disinfection by-products. Unlike a surface water source such as a creek or lake, groundwater sources are generally less variable from season to season. Bacteria are detected from time to time in the source water. A large increase in bacteria, often following a major weather event, indicates contamination of the aquifer that is often caused by inadequate sealing of a well allowing surface drainage to enter the casing. The risk of aquifer contamination is the primary reason disinfection is provided.

Non-coliform or background bacteria are also present within the water main system. While these bacteria are not harmful to human health, when present in large numbers they have the potential to obscure other, more harmful bacteria in samples and cause errors in detection at the lab. For this reason, a maximum non coliform bacteria count of 100 colony forming units (CFU) per 100 ml is a guideline the CRD strives to maintain. A residual concentration of chlorine is maintained in the system for this purpose. A periodic count may turn up in a section of main, especially one with very little usage. The operator flushes that portion of the main to re-establish the disinfection residual and a re-test is done to confirm results. Water in the Surfside area is also treated using an absorptive media to remove naturally occurring arsenic from the groundwater source. This treatment reduces arsenic well below the maximum limit considered safe for drinking water:

Canadian Drinking Water Guidelines	10 µg/litre *
Levels of arsenic in the untreated well water, typical	49µg/litre
Levels of arsenic in the treated water from the new plant	0.7µg/l – 4.5µg/l

* Notes

- 1) The Drinking Water Guideline for arsenic was reduced in 2007 from 25 to 10 µg/l to match the US EPA standard and the World Health standard.
- 2) µg/litre = micrograms per litre

Water delivered to the Surfside service area is safe to drink, and typically meets the guidelines set out in the *Canadian Drinking Water Guidelines (CDWG)*, and the requirements of the *British Columbia Drinking Water Protection Act and Regulation* as administered by the Vancouver Island Health Authority (VIHA).

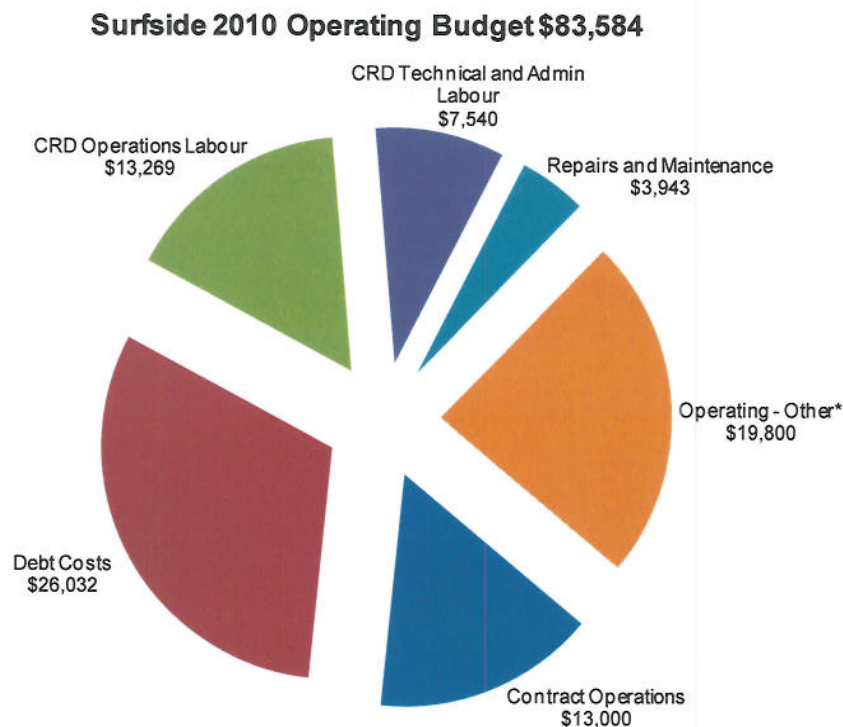
Annual Operating Budget

Attached is a copy of the *Statement of Financial Activities* as prepared by CRD Finance and Corporate Services for the year 2009. The statement provides an overview of the revenues and expenditures for the year. Revenues are generated primarily through parcel taxes and user fees, and small amounts for interest on savings and miscellaneous

revenue such as late payment charges.

Expenditures include all costs to administer the service. General government services are charges levied by CRD Corporate Services for the financial processing of the budget and collection of fees and charges. Other includes all expenses needed for the operation of the service including all CRD labour costs for day to day operations, CRD service personnel hours performing maintenance and repairs, chemicals, electricity, water testing costs, maintenance parts allowances for electrical and mechanical equipment, rental or equipment as necessary and allowances for technical and staff support to the committee, and for the payment of debt. The annual costs of service as budgeted for 2010 are shown in Figure 2.

Figure 2. 2010 Operating Budget



*Includes arsenic media purchase and disposal, water testing, operating supplies, insurance, travel expenses, meeting expenses, financial services, building inspection services, telecommunications, permits and licenses, rentals and leases

The difference between revenue and expense is added to any surplus or deficit carried forward from the prior year. If there is a significant surplus, funds may be transferred to a reserve or capital project account. The surplus or deficit balance after any transfers is carried to the following year. Regional District services are not permitted to plan to carry forward a deficit, so a deficit in a given year usually requires a tax or fee increase in the following year to recover costs and prevent a subsequent deficit.

The Surfside 2009 revenue of \$85,702 includes \$31,109 parcel tax and \$52,266 user fees. The "other" revenue is primarily connection charges. The total expenditures for 2009 were \$82,169, of which \$26,032 is the annual cost of borrowing for capital work, and the remainder is the cost of operation and administration of the service. Operating costs for Surfside were elevated in 2009 due to efforts to locate and repair distribution leaks.

The difference between revenue and expenditures in 2009 amounted to a net revenue of \$3,533 at year end. This amount was reduced by the deficit of \$2,050 carried forward from 2008, leaving a surplus of \$1,483 carried forward to 2010. The current balance in the reserve fund is \$18,370, and the balance in the capital project fund is approximately \$20,661.

Water System Problems - Who to Call

To report any event or to leave a message for the Surfside Water Operator, Mr. Jean Beaudet:

First Call: 539-3300

If you do not reach someone at 539-3300, please report emergency events directly to:

1-250-388-6275 and ask for pager 2614

When connected to the pager message system, please leave your name, your phone number, a brief description of the problem and that the problem is with the **Surfside** water system. Expect a phone call from a CRD duty operator within a short time.

CS:ls

Attachments: 1

CAPITAL REGIONAL DISTRICT

WATER REVENUE FUND

Statement of Financial Activities (Unaudited)

For the year ended December 31, 2009

		Surfside Water Supply
Revenue		
Transfers from government	\$	31,109
Sale of services		52,266
Other revenue from own sources:		
Interest earnings		178
Other revenue		2,111
Grants in lieu of taxes		38
		85,702
Expenses		
General government services		3,020
Grants in aid		-
Other		79,044
Salaries and wages		-
Other fiscal services		105
Recovery		-
		82,169
Net revenue(expenses)		
		3,533
Transfers to own funds:		
Water Capital Fund		-
Reserve Funds		-
Equipment Replacement Fund		-
Transfers from own funds:		
Reserve Funds		-
Annual Surplus		
		3,533
Accumulated surplus, beginning of year		(2,050)
Accumulated surplus, end of year	\$	1,483