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**BEDDIS WATER SERVICE
ANNUAL REPORT
FRIDAY 18 NOVEMBER 2011**

Operations

With few exceptions, the Beddis Water System has operated reliably in the past year. Significant events and activities include:

- 2010 - 100mm watermain break and repair on Creekside Drive
- 2010 – Sky Valley reservoir was cleaned
- 2011 – Creekside PRV – replacement of deteriorated pressure reducing valve mechanical components
- 2011 – All watermains were flushed in the Spring and the Lautman reservoir was cleaned to control growth of non-coliform and background bacteria
- 2011 – Cusheon Lake intake was inspected and cleaned in the Spring and again in the summer to ensure reliable service
- 2011 – In order to protect the pumps from thermal overload, electrical work was completed to ensure the Lautman booster pumps can only run when the lake intake pumps are running
- 2010/2011 - North Salt Spring Waterworks operated under contract with CRD to provide annual operational services
- 2011 – Lautman reservoir developed a leak; a temporary repair has been completed until a more permanent solution is established

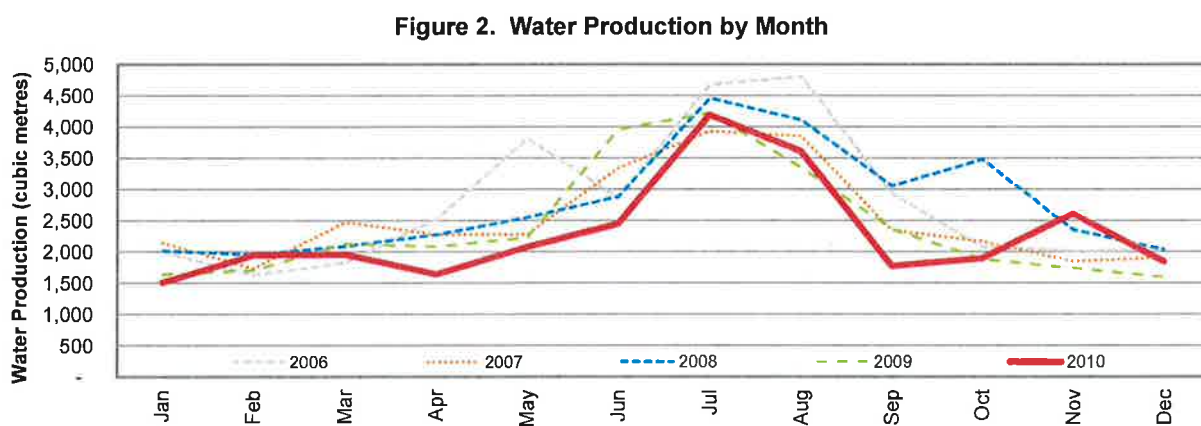
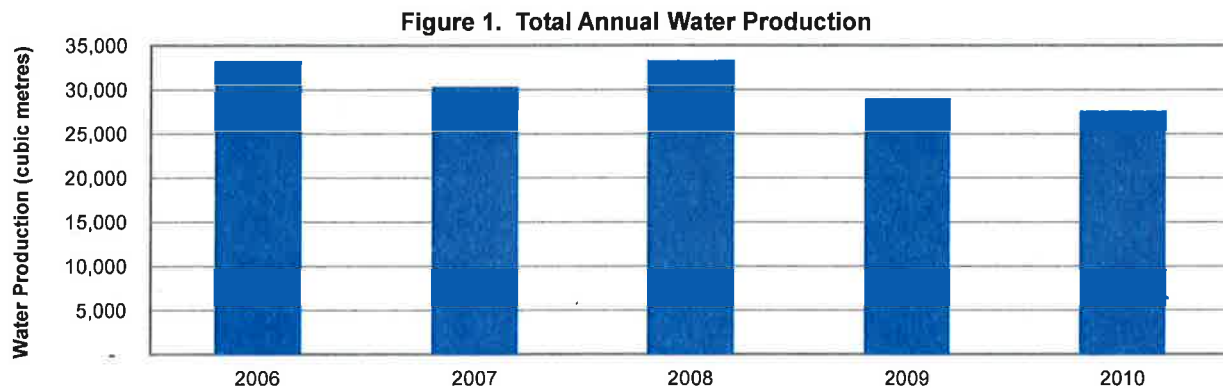
Treatment Upgrade Project

The Beddis water system upgrade project was initiated when the service was transferred to the CRD in 2005. Construction progress on the Beddis treatment and distribution upgrade project was suspended in May 2009 due to lack of funding to complete the work, and has not progressed since that time. Working with Genivar Consultants, staff and the Beddis Water Service Commission have defined a proposed scope of work and budget to complete the treatment upgrade, and related improvements to water storage and distribution infrastructure.

A referendum is proposed for 2012 for the Beddis electors, to consider authorization to borrow up to \$1,057,000 to complete the project by 2013. Details of the project scope and the referendum are provided in the attached newsletter.

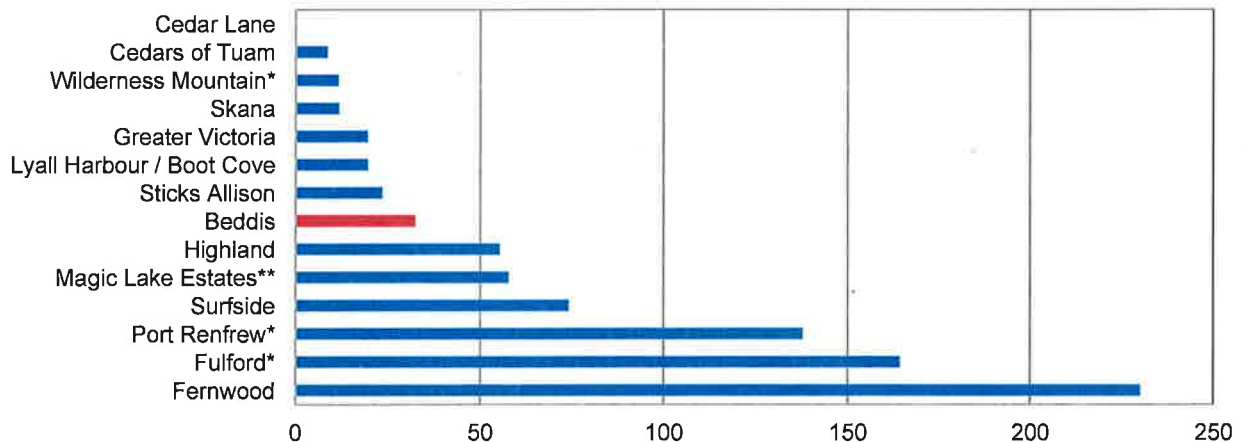
Water Supply and Demand

Annual water production since 2006 is shown in **Figure 1**. A total of 25,517 cubic metres (m³) of water was abstracted from Cusheon Lake in 2010, nearly 5% less than in 2009, and the lowest annual total since the CRD began operating the system in 2005. **Figure 2** shows monthly water production since 2006. Water production averages about 2,000 m³/month in winter, and roughly doubles in July and August.



The Beddis system is fully metered, and meters are read every three months. Meter data enables water production and consumption to be compared in order to estimate leakage losses in the distribution system. The difference between production and total metered consumption, called non-revenue water, includes distribution leaks, meter error, and unmetered uses such as fire hydrant usage and distribution system maintenance. Non-revenue water in 2010 was 4,100 m³, or 15% of overall production. Non-revenue water was 32 m³ per service connection, which is relatively low considering the length of water main per service connection in the Beddis Water System. A comparison with other CRD water systems is provided in **Figure 3**.

**Figure 3. Non-Revenue Water per Connection (cubic metres)
CRD Water Local Services**

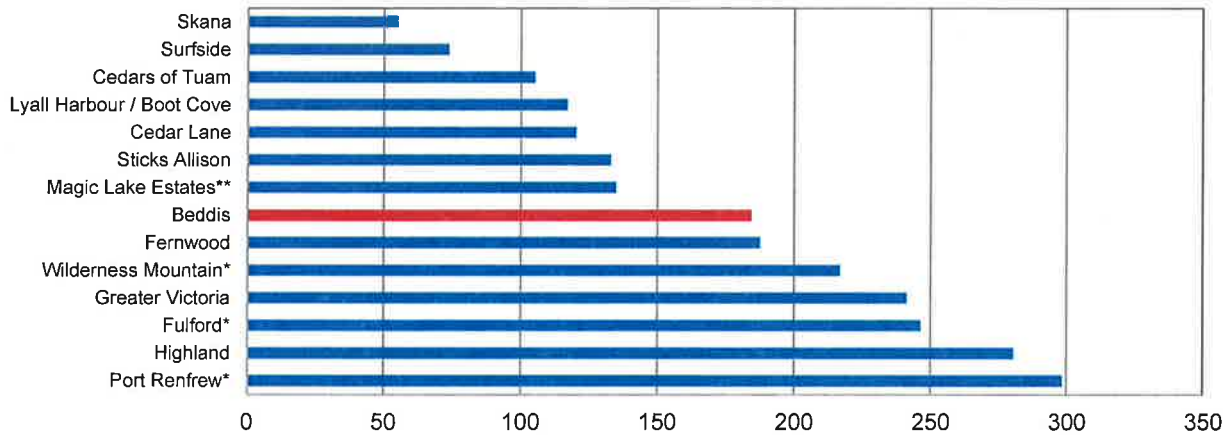


* Residential is unmetered - residential demand is estimated

**Consumption data is based on 343-576 accounts measured for a partial year

The average single-family residence in the Beddis area used 184 m³ in 2010, which is similar to other CRD water service areas on Salt Spring Island with surface water sources. However, a single customer in the Beddis area accounts for a significant proportion of overall use. When this customer is excluded, the average is reduced to about 170 m³. A comparison with other CRD water systems is provided in **Figure 4**.

**Figure 4. Average Annual Water Use per Connection (cubic metres)
CRD Water Systems**



* Residential is unmetered - residential demand is estimated
**Consumption data is based on 343-576 accounts measured for a partial year

Water Quality

The analytical results of water samples collected over the past year from the Beddis Water System show that the quality of drinking water is satisfactory and within regulatory limits. Trihalomethanes, a by-product of the chlorine disinfection process was just under the 100 microgram per litre limit in 2011 but exceeded the limit in 2010. Health effects of trihalomethanes are long term (over a lifetime). The new treatment plant will remove carbon from the source water that is associated with the production of disinfection by-products such as trihalomethanes.

Water quality results for the Beddis Water System are now being posted on the CRD website at: <http://www.crd.bc.ca/saltspring/water/beddis/water-quality.htm>

Water quality data collected in 2010 has been tabulated and is also posted on this website.

2010 Financial Report

Attached is a copy of the *Statement of Financial Activities* as prepared by CRD Finance and Corporate Services for the year 2010. The statement provides an overview of the revenues and expenditures for the year. Revenues are generated primarily through parcel taxes and user fees (fixed and variable based on water use), 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.

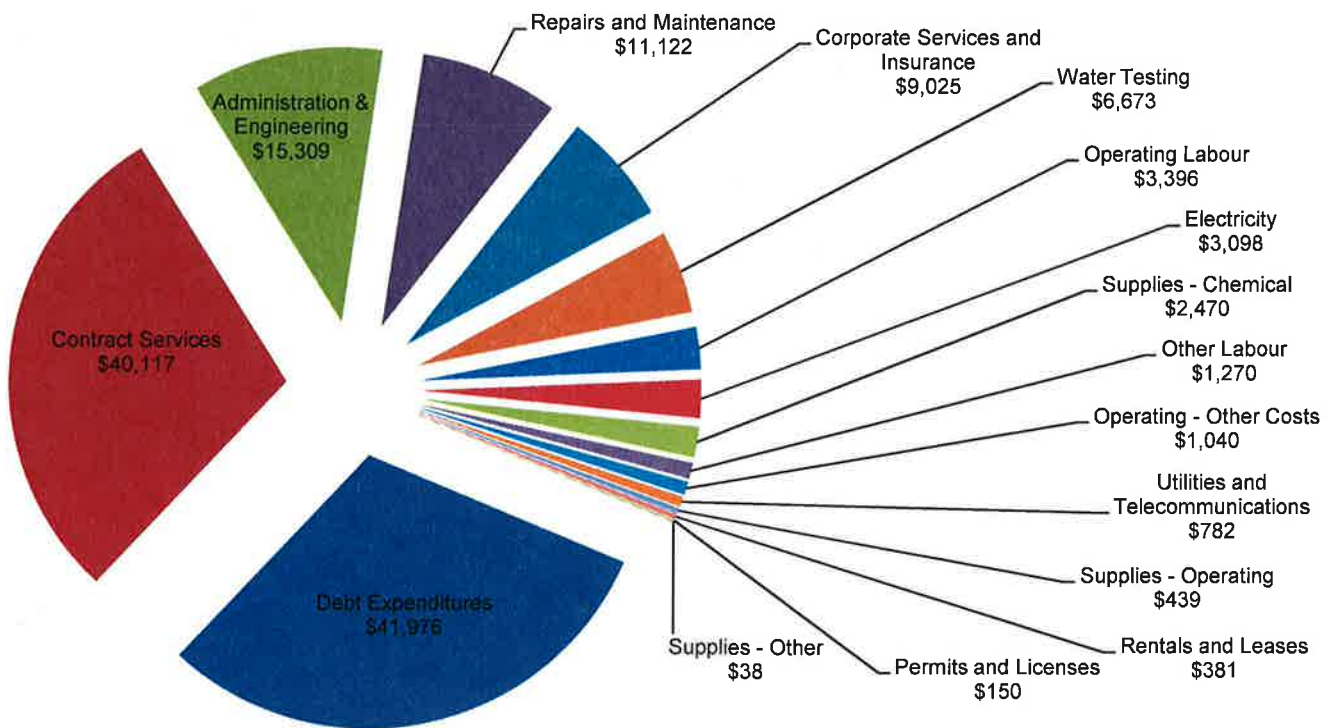
The difference between revenue and expense is added to any surplus or deficit carried forward from the prior year. If there is a significant surplus, funds may be transferred to a reserve or capital project account. The surplus or deficit balance after any transfers is carried to the following year. 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 Beddis 2010 revenue of \$170,548 includes of \$70,454 in water sales, \$39,751 in fixed charges and \$58,954 in parcel taxes. The total expenditures for 2009 were \$137,286, of which \$41,976 was the annual cost of borrowing for capital work, and the remainder was the cost of operation and administration of the service. Operating expenses were about \$30,000 under budget, since the budget included an unused allocation for operating the new treatment plant that did not enter service in 2010. A breakdown of operating expense is shown in **Figure 5**.

The difference between revenue and expenditures in 2010 amounted to a net revenue of \$33,262 at year end, which was added to a \$30,325 surplus carried forward from 2009, leaving a surplus of \$63,587 carried forward to 2011. The balance in the Beddis Capital Reserve Fund at 31 December 2010 was \$5,043.

Figure 5. 2010 Operating Expense

Beddis 2010 Actual Operating Expense \$137,287



Water System Problems - Who to Call:

To report any event or to leave a message regarding the Beddis water system, call either:

CRD water system emergency call centre: 1-250-474-9630

CRD local operator (Ganges Wastewater Treatment Plant): 250-537-4314

CRD water system general enquiries (toll free): 1-800-663-4425



Ted Robbins, B.Sc., CTech
Senior Manager, Water Management



J.A. (Jack) Hull, MBA, P.Eng.
General Manager, Integrated Water Services
Concurrence

TR:CS:ls
Attachments: 1

CAPITAL REGIONAL DISTRICT

WATER REVENUE FUND
Statement of Financial Activities
For the Year Ended December 31, 2010

		Beddis Water Supply
Revenue		
Transfers from government	\$	58,954
Sale of services		110,205
Other revenue from own sources:		
Interest earnings		602
Other revenue		787
Grants in lieu of taxes		-
		170,548
Expenditure		
General government services		3,870
Grants in aid		-
Other		133,272
Salaries and wages		-
Other fiscal services		144
Recovery		-
		137,286
Net revenue (expenditure)		33,262
Transfers to own funds:		
Water Capital Fund		-
Reserve Funds		-
Equipment Replacement Fund		-
Transfers from own funds:		
Reserve Funds		-
Change in fund balance		33,262
Opening balance		30,325
Closing balance	\$	63,587



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Beddis Water Service NEWSLETTER

November 2011



Upgrade Project Update

The Beddis water system upgrade project was initiated when the service was transferred to the CRD in 2005. Work proceeded through 2009, but was not completed due to a funding shortfall. Staff and the Beddis Water Service Commission have continued working with Genivar Consultants to define the remaining project scope and cost estimates. Genivar has submitted a recommended scope and cost estimate for a construction project that will fulfill the original project objectives and improve the quality and reliability of your drinking water service. The project consists of three main elements:

- Construct and commission water treatment plant works
 - Complete mechanical and electrical construction at the Cusheon Lake treatment plant
 - Start up and prove out equipment before the plant enters service
 - Install a chlorine contact chamber
 - Demolish and remove obsolete equipment in the old pumphouse
- Construct and commission revised storage tank works
 - Decommission the existing Lautman tank and pump station, and Sky Valley tank
 - Construct an additional tank next to the new (existing) Sky Valley tank
 - Construct a new booster pump station with backup power to provide water service to customers on Sky Valley Road
 - Connect and commission the new booster station and tanks
 - Install a new supply watermain between the Lautman tank site and the new Sky Valley site
- Construct and commission a new pressure reducing valve station at Cusheon Lake Road

This work is expected to achieve the following outcomes:

- Meet legislated requirements for drinking water quality
- Realize the value of the community's past investment in a new water treatment plant and tank
- Improve the reliability of water service (e.g. lower risk of service interruptions during power outages)
- Improve water service pressures in some parts of the system, where pressures were previously very high or very low





Financial Impact

The cost of the completed work prior to 2010 was \$1,180,000 of which funding assistance of \$506,000 was provided from the Canada-British Columbia Infrastructure Program, \$80,000 from Gas Tax funding, \$325,500 from debt in 2004 and the balance from the Beddis water system of \$267,500.

Based on the amount of \$1,057,000 being borrowed through the Municipal Finance Authority and repaid over 15 years at 6% annual interest, the annual cost of principal and interest will be approximately \$116,208.

The resulting impact on the parcel tax for this

debt will be approximately \$886, which includes a 5.25% fee from the Province of BC. It is anticipated that this increase would be required in 2013.

Referendum to Approve Borrowing for the Project

Provincial legislation requires Regional Districts to obtain electoral assent to borrow money for capital projects. Although a date has not yet been established, a referendum will likely be held in February 2012 for the assent of the Beddis electors (residents and non-resident property owners) to borrow up to \$1,057,000 to complete the proposed upgrades.

If the referendum passes, the project will proceed and it is anticipated that the work would be completed by the spring of 2013. If it fails, an alternative project scope and budget would need to be developed to meet legislated requirements, manage risks and provide an acceptable level of service to the community.

Further Information

Residents will be notified when a referendum date is established and when referendum and voter eligibility information is available.

