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**LYALL HARBOUR BOOT COVE WATER LOCAL SERVICE COMMITTEE
ANNUAL GENERAL MEETING**

Notice of Meeting on Saturday, August 13, 2016 at 11:30 am
Saturna Island Community Club
105 East Point Road, Saturna Island, BC

D. Thachuk (Chair) Director D. Howe R. Lewis M. Fry
J. Money I. Rowe

AGENDA

1. Approval of Agenda
2. Adoption of Minutes of Annual General Meeting of August 15, 2015
3. Chair's Report
4. Annual Report
5. Election of Committee Members
6. New Business
7. Adjournment

To ensure a quorum, advise Lorrie Siemens 250.360.3087 or lsiemens@crd.bc.ca if you cannot attend.

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Minutes of the Annual General Meeting of the Lyall Harbour/Boot Cove Water Local Service Committee
Held August 15, 2015 at the Saturna Island Community Club, 105 East Point Road, Saturna Island, BC

PRESENT: **Committee Members:** D. Thachuk (Chair), Alternate Director P. LeBlond, I Rowe, R. Lewis, J. Money
Staff: P. Sparanese, Senior Manager, Infrastructure Engineering and Operations; M. Cowley, Senior Manager, Infrastructure Engineering, D. Robson, Manager, Saanich Peninsula and Gulf Islands Operations, J. Marr, Acting Manager, Water Engineering and Planning, P. Dayton, Senior Financial Analyst, D. Puskas, Acting Manager, Wastewater Engineering and Planning, W. Foster, Saturna Island Waterworks Operator, L. Siemens (recorder)
11 Members of the Public

The meeting was called to order at 9:10 am.

The chair explained that the reason for the presence of several CRD staff, being that they were attending another meeting on Pender Island and were combining travel to both meetings.

1. Approval of Agenda

MOVED by R. Lewis, **SECONDED** by I. Rowe,
That the agenda be approved as distributed.

CARRIED

2. Adoption of Minutes of Annual General Meeting of August 16, 2014

MOVED by R, Lewis, **SECONDED** by I. Rowe,
That the minutes of the AGM of August 16, 2014 be adopted as previously circulated.

CARRIED

3. Chair's Report

Chair D. Thachuk presented a verbal report. The report touched on the following topics:

- Recommendations from the dam inspection report which will be addressed in the CRD report.
- Lake levels.
- Wes Foster, Vanessa Verbitsky and Roy Villa were thanked for their continuing service on the water system.

Chair Thachuk advised that Sara Collins has resigned from the committee and thanked her for her past service. He also advised that P. Sparanese will be leaving the CRD and thanked him for working with them through difficult times.

The chair responded to questions arising from his report.

4. Annual Report

P. Sparanese presented a written report and a PowerPoint presentation. The following topics were addressed:

- Purpose of Annual General Meeting
- Water Production and Demand
- Water Quality
- Operations
- Capital Expenditures (2014 to 2019)
- Financial Report – 2014

Staff responded to questions arising from the annual report.

6. Election of Officers

Nominations were called for one position for a term beginning January 1, 2016 and expiring on December 31, 2017 and a vacant term position to begin upon appointment and expiring on December 31, 2017. The following nominations were received:

- Ron Lewis (re-elected)
- Michael Fry (replacing S. Collins)

Both agreed to stand for election. Nominations were called for two more times, and hearing none, Ron Lewis and Michael Fry were elected by acclamation. Their names will be forwarded to the CRD Board for appointment.

7. New Business

Alternate Director LeBlond advised that he would take the suggestion regarding taxation being spread to community services to Director Howe for investigation.

J. Money thanked Director Howe, for his hard work supporting the water service and helping the committee to work collaboratively with CRD staff.

8. Adjournment

The meeting was adjourned at 10:52 am.



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**LYALL HARBOUR - BOOT COVE WATER LOCAL SERVICE
2015 ANNUAL REPORT
PRESENTED ON AUGUST 13, 2016**

Purpose of the Annual General Meeting

The agenda for the Annual General Meeting (AGM) is approved by the members of the committee. The purpose (and hence the agenda items) of the meeting are:

- To have the last year's AGM meeting minutes approved (by committee members);
- To present reports on the work of the committee, the past year's operation, maintenance, capital upgrades and financial information of the service to the service residents and owners;
- To nominate members for appointment to the service committee;
- To enable the public to share comments on subjects which relate to the work of the committee; and,
- The committee can identify (under "new business") issues on which it wants feedback at the meeting. Motions are not considered from the public at the AGM.

Background

The Capital Regional District (CRD) Lyall Harbour Boot Cove water local service, on Saturna Island includes 174 parcels encompassing a total area of about 100 hectares, of which approximately 148 parcels have water accounts (in 2015). The water service area is similar to other island communities where many of the lots are occupied by part-time residents. Because of the part-time occupation, the water demands for the system fluctuate significantly between the summer and winter seasons. The service is administered by the Lyall Harbour Boot Cove Water Local Service Committee.

Water Supply

The service draws water from infiltrator beds with Money Lake being the water supply source. The water level of Money Lake is regularly measured and recorded and historical levels are shown in **Figure 1**. It is notable that the lake level was slightly lower than average from May through November which is consistent with the drought conditions experienced in the province in 2015.

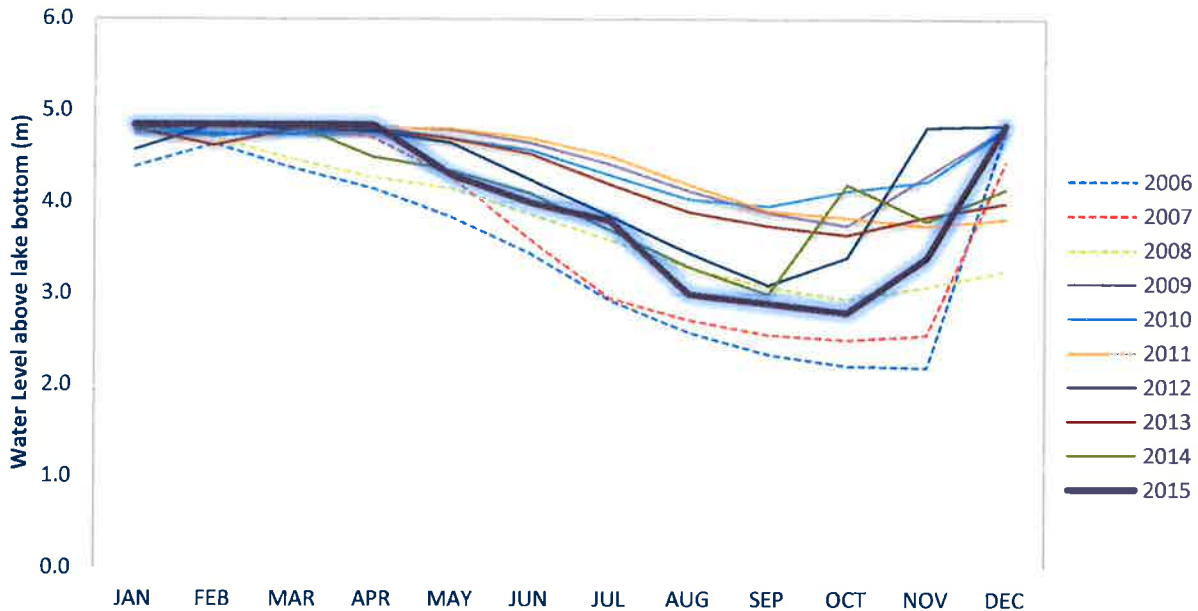


Figure 1: Money Lake Monthly Water Level

Water Production

In 2015, a total of 24,492 cubic meters (m³) of water was extracted from Money Lake and the seepage collection system. This volume is 13% higher than the previous year and approximately 31% higher than the five year annual average. Water production by month for 2012 to 2015 is shown in **Figure 2**. The increase in annual water production since 2013 can be partially attributed to the change in operating procedure associated with the new water treatment facility which requires filter backwashing.

The increased production from May to July 2015 could be as a result of higher consumption during a much drier spring in 2015. However, a noticeable decrease in consumption occurred in late July and August when the community adopted voluntary Stage 3 water conservation measures.

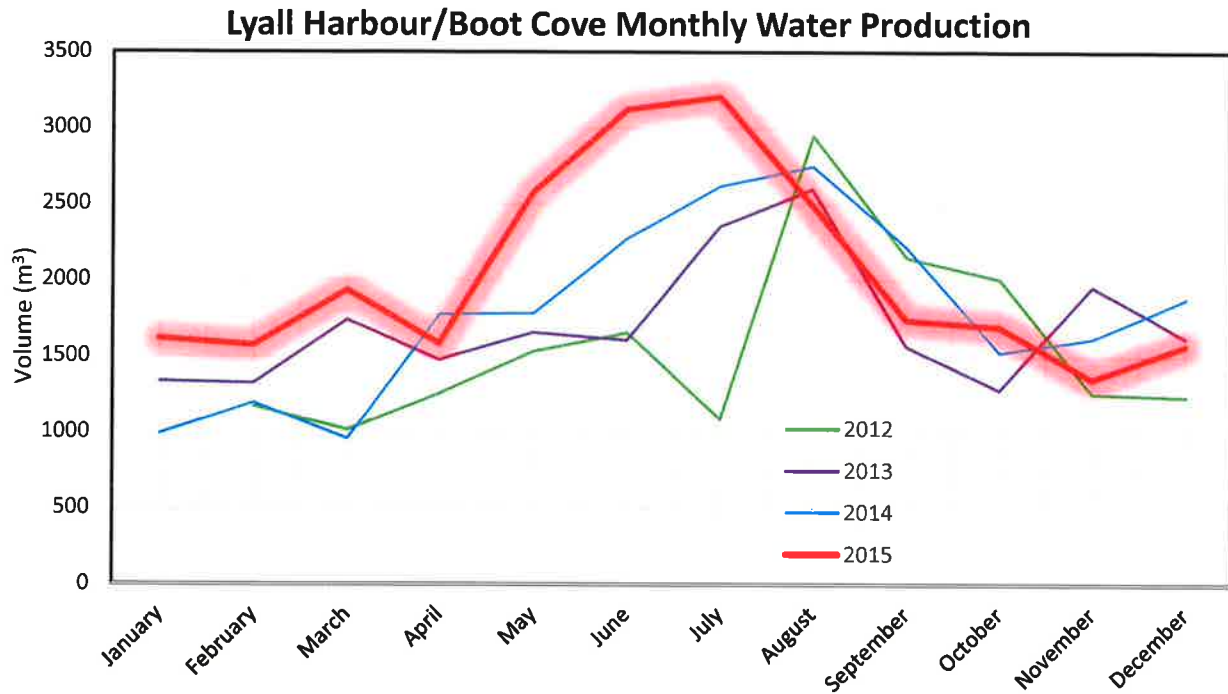


Figure 2: Lyall Harbour/Boot Cove Water System Monthly Water Production

Water Demand

The 2015 metered water (customer water demand) for Lyall Harbour/Boot Cove totaled 18,282 m³, a 2% increase from the previous year and 11% increase from the three year average. Comparison of the annual water production and the annual water demand from 2011 to 2015 are shown in **Figure 3**.

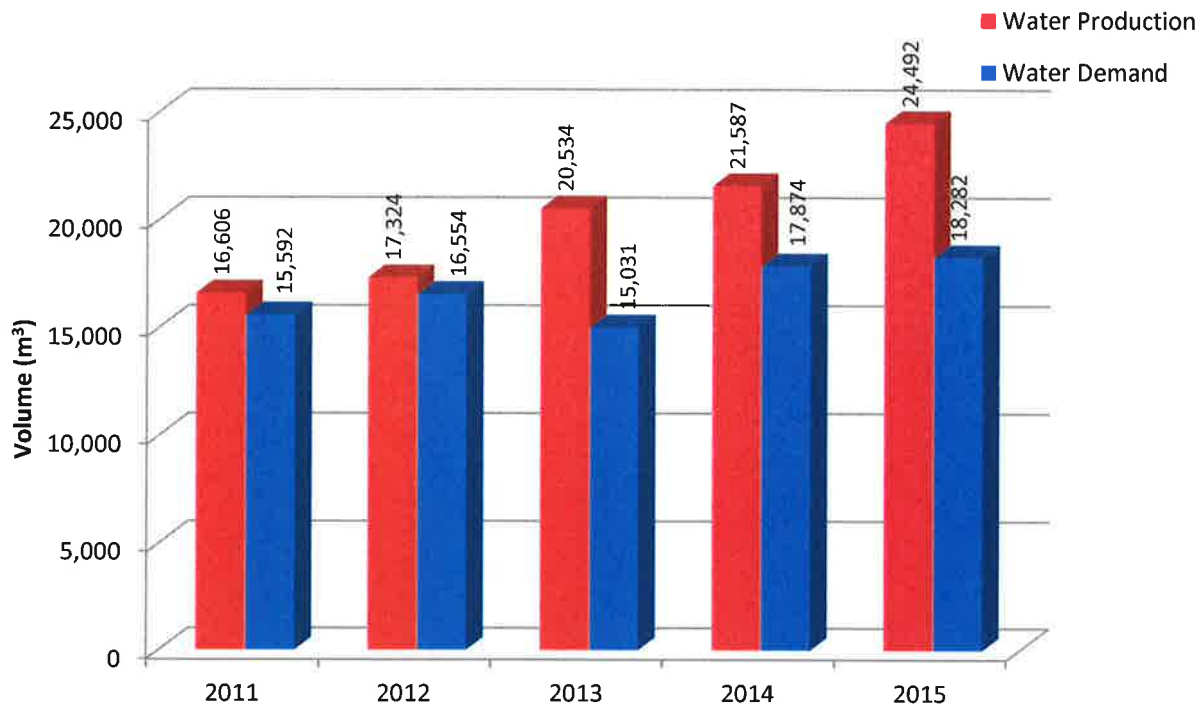


Figure 3: Lyall Harbour/Boot Cove Water System Annual Water Production and Demand.

The difference between annual water production and annual customer demand is referred to as non-revenue water and can include water system leaks, water system maintenance and operational use (e.g. water main flushing, filter system backwashing), potential unauthorized use and fire-fighting use. As previously noted, operational water use increased beginning in 2013 when the new water treatment plant became operational.

The 2015 non-revenue water represents about 25% of the total water production for the service area. However, almost half of the non-revenue water can be attributed to operational use. Therefore, the non-revenue water associated with system losses is approximately 12% which is considered normal for most potable water distribution systems.

Drinking Water Quality

Since November 2012, the new water treatment process has a raw water source of predominantly seepage water collected from below the Money Lake dam, which is supplemented with flows from the lake during peak summer demand. Overall, water quality met the *Guidelines for Canadian Drinking Water Quality (GCDWQ)* throughout 2015. However, there were occasional elevated levels of disinfection by-product concentrations which indicated some deficiencies in removing organic compounds by the treatment process.

The data below provides a summary of the water quality characteristics in 2015:

Raw Water:

- The raw water exhibited overall low concentrations of total coliform bacteria with higher concentrations during the summer months, no *E. coli* bacteria and only 1 *Cryptosporidium* oocysts/100 mL were found in one sample in 2015.
- The raw water had naturally high concentrations of iron and manganese especially during the late summer/fall season. Elevated iron and manganese concentrations in Money Lake are compounded by the ground passage of the seepage water.
- The mean annual raw water turbidity was within the typical range of 2.0 NTU with peaks of 20 NTU on April 14, 2015 and 18.6 NTU on September 9, 2015. The reasons for the two unusually high spikes are unknown.
- The raw water was slightly hard (median hardness 42.2 mg/L CaCO₃).

Treated Water:

- The treated water was bacteriologically safe to drink with no confirmed *E. coli* or Total Coliform bacteria.
- The treated water turbidity (cloudiness) was usually well under the GCDWQ turbidity limit of 1.0 NTU during the summer months but slightly over during the rest of the year (peak 1.71 NTU on January 26, 2015).
- The treated water total organic carbon (TOC) was moderate to high with an annual mean of 3.83 mg/L. There is currently no guideline in the GCDWQ for TOC levels, however TOC levels > 2 mg/L indicate a potential for disinfection by-product exceedances. TOC levels > 4 mg/L are usually a precursor for high disinfection by-product concentrations.
- The two out of three tests and the annual average level of the disinfection by-product THM (113 µg/L) exceeded the 100 µg/L limit in the GCDWQ. The health risk from THMs over the Maximum Acceptable Concentration (MAC) is from chronic exposure over many years. The annual average THM concentration in past years has been under the MAC of 100 µg/L so the elevated annual concentration in 2015 poses no significant risk to LHBC water users. Concentrations of another critical disinfection by-product (HAA) were well below the limit of 80 µg/L.

Water quality data collected from this drinking water system can be reviewed on the CRD website:

<https://www.crd.bc.ca/about/data/drinking-water-quality-reports/southern-gulf-islands-water-quality-reports/lyall-harbour-boot-cove-water-quality-reports>

Operations

CRD's Integrated Water Services, Peninsula and Gulf Island Operations are responsible for the day to day operations of the water system. Saturna Island based operations staff perform regular weekly routine operational site visits to several locations including the water treatment facility, reservoir and various water distribution system sites to ensure the water system is functioning properly. Regular operation and maintenance duties include weekly water system chlorine residual testing, monthly bacteriological water sampling, quarterly water meter reading and facility and grounds maintenance. Additional support is provided by Peninsula Operations staff including the electrical and mechanical maintenance staff who typically respond to significant emergencies and to perform routine preventative maintenance work.

A summary of the major operational and maintenance activities is provided in **Table 1**.

Table 1: Summary of key operational and maintenance activities in 2015.

TASK	NOTES
Recirculation pump enclosure repair	Small wood enclosure housing the recirculation pumps at the upper water treatment building was rotten and in disrepair.
Chlorine chemical pump rebuild	The chlorine pump failed and required rebuilding.
Ultra Violet Light (UV) unit maintenance	UV disinfection equipment lamps were removed and replaced as part of the preventative maintenance program
Chlorine analyzer maintenance	The chlorine residual analyser probe tip was replaced as part of the preventative maintenance program.
Leak repair near water treatment building	A significant water leak was identified just outside of the water treatment building. A water process line had failed and required complete replacement.
Leak investigation	Leaks identified at 105 Mill Road and 115 Boney Bank. Homeowners were notified and advised to make repairs.
Water treatment building roof replacement.	The roof replacement was part of an approved 2015 capital project.
Water connection installation	Connection of 175 East Point Road to the water system at the request of the property owner.
Ozone equipment repairs	The ozone flow sensor was replaced and the ozone destructor system required significant maintenance.
Painting/Staining	Water treatment plant exterior was painted.
Pressure regulating valve (PRV) replacements.	Pressure regulating valves and piping were replaced at the East Point and Narvaez PRV stations. These replacements were part of an approved 2015 capital project.
Pressure regulating valve bypass piping installation	Isolation valves were installed at the East Point and Narvaez PRV stations. These installations were part of an approved 2015 capital project.
Money Lake spillway joint repair.	Initial work was performed repairing the Money Lake concrete spillway expansion joints. More extensive repair effort was determined and the capital project was deferred until 2016.

Capital Improvements

Numerous capital improvements were approved for 2015. Scope and project status follows:

1. Prepare an Operation, Maintenance and Surveillance (OMS) Plan and Emergency Preparedness Plan (EPP) – in accordance with the Dam Safety Regulation an OMS and EPP were prepared for use by the CRD staff and others to properly maintain the dam and take actions as required during an emergency.
2. Re-caulk the concrete spillway structure - work related to re-caulking of the dam spillway was initiated and is due to be completed in 2016.
3. Replace the spillway boom – a new spillway log boom to prevent floating debris from blocking the spillway was completed.
4. Filter building roof replacement – the roof on the filtration building was replaced.
5. Install isolation valves – isolation valves were installed at the pressure reducing valve stations in accordance with Phase 1 of the project.
6. Pressure regulating valve replacements - two PRV's at East Point and Narvaez were replaced and the third valve will be replaced in 2016.
7. Safety Equipment – an eye wash and drench hose assembly to protect the water treatment plant operator from injury –to be installed in 2016.
8. Relocate shed to upper plant – the utility shed originally located at the dam is to be relocated to the upper water treatment plant site. To be installed in 2016.

The five-year capital budget included several items for the period between 2016 to 2020 as follows: (refer to the September 25, 2015 Committee Staff Report and minutes for further details).

Dam Safety Improvements – The dam safety review completed in 2012 identified several items related to the Money Lake Dam #1 infrastructure and operation to ensure that the dam performs safely. Future dam safety work includes a soil investigation, piezometer installation and simple seismic stability assessment scheduled for 2016 and two phases of the installation of a gravel toe berm on the downstream side of the dam in years 2017 and 2018. The dam safety improvements currently total \$146,000, half of which is funded from the water service participants and the other half is funded from the Community Works Fund (gas tax grant).

Equipment Infrastructure Replacement – The approved 2015 capital budget includes projects to replace the roof on the water treatment plant and a variety of valve replacements totaling \$18,500. Future capital projects include additional valve replacements including an air release valve, isolation valves and bypasses and standpipes totaling \$40,000 in years 2016 to 2020.

The five year equipment infrastructure replacements totals \$58,500 of which half is funded from the water system (parcel tax and reserve fund) and the other half is funded from the Community Works Fund (gas tax).

Supply Works Improvements – in 2015 several new items were raised that needed to be addressed:

1. Paint Recirculation Pipe and Ancillary Work (\$2,000 in 2017),
2. Cover Recirculation Pipe (\$2,000 in 2018); and,
3. Chlorine injection Pump (\$3,000 in 2020).

The draft Strategic Asset Management Plan (SAMP) is due to be delivered to the committee for its consideration during the 2017 budget process. The SAMP will identify future capital projects to ensure the reliability of the water system by completing system improvements as the existing

infrastructure reaches its life expectancy. The SAMP will provide an estimate of the annual budget that would be required to replace assets at the end of their service lives and to provide the level of preventative maintenance required to sustain an acceptable level-of-service and maximize the service life of system components.

Financial Report

Please refer to the attached *Statement of Operations*. *Revenue* includes parcel taxes (*Transfers from Government*), fixed user fees (*User Charges*), interest on savings (*Interest Earnings*), a transfer from the maintenance reserve account, and miscellaneous revenue such as late payment charges (*Other Revenue*).

Expenses includes all costs of providing the service. *General Government Services* includes budget preparation, financial management, utility billing and risk management services. *CRD Labour and Operating Costs* includes CRD staff time as well as the costs of equipment, tools and vehicles. *Debt servicing costs* are interest and principal payments on long term debt. *Other Expenses* includes all other costs to administer and operate the water system, including insurance, supplies, water testing and electricity.

The difference between *Revenue* and *Expenses* is reported as *Net Revenue (expenses)*. Any transfers to or from capital or reserve accounts for the service (*Transfers to Own Funds*) are deducted from this amount and it is then added to any surplus or deficit carry forward from the prior year, yielding an *Accumulated Surplus (or deficit)* that is carried forward to the following year.

The Lyall Harbour Boot Cove 2015 revenue of \$178,383 includes:

- \$99,285 – *Transfers from government*
- \$75,242 – *User Charges*
- \$40 – *Interest earnings*
- \$3,450 – *Transfer from maintenance reserve*
- \$365 – *Other revenue*

Total expenditures for 2015 were \$172,467, comprised of:

- \$6,620 - *General government services*
- \$108,725 - *CRD labour and operating costs*
- \$40,031 – *Debt servicing costs, and*
- \$17,092 – *Other expenses.*

The difference between revenues and expenditures at 2015 year end amounted to a net surplus of \$5,916. \$1,500 was transferred to the maintenance reserve account, leaving a surplus of \$4,416 which was added to the opening deficit of \$7,938 yielding a net deficit of \$3,522 to be carried forward to 2016.

2015 User Fee charges were \$472.48 per Single Family Equivalent (SFE) and 2015 Parcel Tax charges were \$611.11.

At December 31, 2015 the Lyall Harbour Boot Cove Water service had the following amounts in reserves funds and accounts:

DESCRIPTION	BALANCE
Maintenance Reserve Account	\$3,050
Capital Reserve Fund (1069 101894)	\$105,876
Funds remaining to spend on projects in progress (WSV185101)	\$29,087

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General Manager, Integrated Water Services
Concurrence

DR/SM/PD/CM:ls

Attachment: 2015 Financial Summary (Statement of Operations)

Lyall Harbour/Boot Cove Water

2015 Financial Summary

	2015	2014
Revenue		
Transfers from government	99,285	97,482
User charges	75,242	73,318
Other revenue from own sources		
Interest earnings	40	41
Transfer from Maintenance Reserve	3,450	-
Other revenue	365	877
Total revenue	178,383	171,717
Expenses		
General government services	6,620	6,619
CRD labour and operating costs	108,725	99,900
Debt servicing costs	40,031	40,044
Other expenses	17,092	18,753
Total expenses	172,467	165,315
Net revenue (expenses)	5,916	6,402
Transfers to own funds		
Capital Reserve Fund	-	-
Maintenance Reserve Account	1,500	1,500
Annual surplus (deficit)	4,416	4,902
Accumulated deficit, beginning of year	(7,938)	(12,840)
Accumulated surplus, end of year	\$ (3,522)	(7,938)

