



Making a difference...together

**PORT RENFREW UTILITY SERVICES COMMITTEE  
2009 OPERATIONS REPORT  
22 OCTOBER 2009**

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The following report is provided for information to residents and users of the Snuggery Cove water and Port Renfrew water, sewer, street lighting areas.

**COMMITTEE STRUCTURE**

The Port Renfrew Utility Services Committee administers the delivery of street lighting services, drinking water treatment and conveyance and waste water treatment and conveyance.

**PORT RENFREW STREET LIGHTING**

At the 18 June 2009 Port Renfrew Utility Services Committee (PRUSC) meeting, a motion was passed to petition the electors of Snuggery Cove to extend the Port Renfrew street lighting service area into the Snuggery Cove water service area. The rationale for the expansion was to incorporate the five installed BC Hydro davit lights at fire hydrant locations on Parkinson Road. Petition forms were distributed by Capital Regional District (CRD) staff in August 2009, with a requested deadline of 31 August. Only five petitions were received of the required 22 for the petition to pass. BC Hydro installed the five lights in the Snuggery Cove area in 2007, based on an initial inquiry only, and without any formal request by the CRD. Reviewing invoices received by the CRD Finance Department show there has been no increase in costs associated with any additional lights being installed.

A deficit in the 2008 operating budget of \$1,074 was carried forward to the 2009 budget and will be addressed through an increase to the parcel tax for the 2010 budget year. That increase does not take into account any anticipated increases to the BC Hydro charge rate. BC Hydro invoices the CRD based on the wattage of each light head and charges each on a monthly basis. Due to administrative errors by BC Hydro, the CRD has previously been billed for only 21 of the 24 lights in the existing service area, and for none of the five Snuggery Cove lights. The three additional street lights in the service area that have not been previously billed by BC Hydro will add an additional \$61/month to the anticipated invoices and approximately \$9/year per parcel in the current service area.

After the unsuccessful August petition, staff informed BC Hydro that the five street lights in Snuggery Cove were no longer required and that three street lights in the existing service area are not being invoiced.

**Street Lighting Budget**

The street lighting budget has been carrying forward a deficit of funds for some years, which is now at \$1,075. The deficit was generated when costs were not recovered to balance the invoiced amounts from BC Hydro. While service costs have increased minimally with inflation, the parcel tax was not raised to offset the additional three lights not being invoiced and for normal increases in user fees. The \$2,900 cost to petition the Snuggery Cove area, internal labour and the carry forward deficit of \$1,075 will need to be recovered through a parcel tax and user fee cost recovery. 2010 rates will need to increase accordingly to address the fact that the community need support higher billing costs than have been invoiced.

## **PORT RENFREW WATER LOCAL SERVICE AREA**

### Water Area Expansion

Three Point Properties Ltd. (TPP d.b.a. RTown Holdings ULC) acquired significant land holdings, adjacent to the Snuggery Cove and Port Renfrew water local service areas, from Timberwest in 2007-2008. RTown has been working with CRD staff to seek expansion of the Port Renfrew water system and an expanded Port Renfrew sewer system to service their phased approach development. To date, RTown has spent considerable resources on consultant designed construction drawings for tendering purposes, and legal fees in the creation of service extension and bylaw amendment documents. Their contribution of a new well and planned upgrades to the system has satisfied the obligation of providing community benefit.

### RTown Development Proposal

To date, the water works proposal from RTown stands as follows:

1. Develop a new groundwater well of sufficient capacity for their long-term requirements (this work now complete).
2. Negotiate and pay the costs of acquisition of a new statutory right of way for the new RTown well over Timberwest lands, and the costs of acquisition of a new statutory right of way for the existing CRD well, both to be turned over to the CRD (this work now complete).
3. Fully fund a new water booster station and water treatment facility to replace the existing pump station. The new station will include new pumps, hydrogen sulfide removal, primary and secondary disinfection system, standby power system, updated electrical service, new controls and SCADA.
4. Disassemble and relocate the existing 100,000 gallon reservoir to a higher elevation to better serve the community and permit development to a higher elevation than the current site would permit. Add capacity to the reservoir (Phase 2).
5. Install a new booster station with standby power, and a new main to lift water from the existing main to the new reservoir location (Phase 2).
6. Install a new pressure reduction station to ensure properties in Beach Camp are not over pressurized (Phase 2).
7. Install watermains, valves and required infrastructure within the developer's lands to CRD specifications and turn over the infrastructure to the CRD, for operation as part of the Port Renfrew water system.
8. Provide statutory rights of way for all infrastructures not located on highways right of way.

RTown plan to develop their land in a phased approach servicing the 42 lot parcel directly behind the community center (Phase 1) first.

### Proposed New Water Service Area

CRD staff and TPP (RTown) have reviewed with the Province and CRD solicitors the creation of a new Port Renfrew water service area #3, which would encompass TPP lands not currently in either water area. There are several benefits to this arrangement for both the developer and the existing community. The service area would be created to fund the installation of new works and to make improvements to the existing water system, not unlike the model used for Snuggery Cove. Unlike the Snuggery Cove/Port Renfrew model, the expansion of Port Renfrew water area #1 will not take in the new lands for purposes of operation and maintenance until the subdivision of the lands is well advanced. As operating costs are shared by parcel tax and user fee and the new development will have few of either in the early years, there is no financial reason to include the area until development progresses. Operating costs instead would be proposed to be shared on a formula between the existing and new areas to keep the sharing of

operating costs fair to both parties. The new area will remain a CRD service and the infrastructure in the new area will be owned by CRD.

#### Water Project Implementation

The implementation of each proposal will require formal agreements and bylaws to be approved or adopted between the CRD Board and TPP. The work is now complete in this area and the developer will be bringing the proposals forward following the 22 October 2009 AGM at a special PRUSC meeting.

#### Pacheedaht First Nation Water Service Agreement

It was intended that the First Nation would extend water from their boundary to their existing water system in 2009 based on prior discussion with RTown and the CRD. The Pacheedaht First Nation has since verbally notified staff that an extension of the Port Renfrew water system to service the Pacheedaht First Nation's lands is no longer being considered.

#### Timberwest Forest Company (Couverdon Real Estate) - Request for Inclusion

Timberwest Forest Products d.b.a. Couverdon Real Estate (CRE) has requested inclusion into the existing Port Renfrew water service area in 2008, and again in the spring of 2009. Each occasion had staff request property development plans and what contribution would be brought forward as community benefit, or effectively a capacity purchase. CRE proposes that they have satisfied community contribution through their dealings with Three Point Properties (RTown) in granting access over their lands for a new community well. Given that staff remains insistent that CRE is not adequately contributing to the community benefit, they requested an audience with the PRUSC at the 17 September 2009 meeting.

At the 17 September 2009 meeting, while the committee conceptually supports the project to extend the water service area to Couverdon Real Estate (CRE) lands, there is now a need to move forward with more formal approvals for the project. CRD staff will need to meet with CRE staff respecting the methodology for development of the lands and bylaws to extend the service, and to identify the basic components of a servicing strategy for the water system. These strategies and bylaws will be presented for consideration of the PRUSC and ultimately the CRD Board in 2010. A letter outlining the next steps was sent to Couverdon Real Estate on 30 September. To date, no reply has been received.

#### **WATER SYSTEM OPERATIONS 2008/2009**

Total treated water for the service area was approximately 42,000 m<sup>3</sup> or approximately 9,310,000 imperial gallons; fire fighting use would be included in the total water volume.

System maintenance included the cleaning of the reservoir in the summer of 2009. There was minor disruption to the service area during the work, which was performed off-hours to minimize inconvenience to the end users. Annual fire hydrant maintenance, flushing and valve operation is scheduled for early November. Operations staff also responded to a main line break in close proximity to the well head earlier in 2009. The situation was quickly resolved and created minimal disruption to the service users.

During the cold snap of early 2009, five residential service water lines froze, cracked and caused leakage within the system. Operations staff responded to all incidents and turned off the water to the unoccupied dwellings. A letter to all residents was mailed out before winter to advocate appropriate freeze protection of private residential water piping and systems.

During the summer of 2009, Timberwest Forest Products cleared their lands surrounding the well points, creating a potential safety issue regarding overhead hydro lines servicing the pumps and treatment works of the community system. Timberwest's Port Renfrew staff was contacted in September and advised that they be aware of the potential of blow down due to the protective stands of lumber having been removed,

which has been acting as a buffer to those trees adjacent to the overhead lines, now susceptible to the winter storms.

One new water service was installed in the Beach Camp area and one pending activation of a water service in Snuggery Cove of which a building permit has not yet been acquired.

#### Baird Creek Water Main Crossing - 2010 Proposed Works

The Ministry of Transportation (MOT), under permit from the Ministry of the Environment (Provincial) and Department of Fisheries and Oceans (Federal) performed substantial repair work at the Murton Creek bridge crossing in September of 2009. Similar works were planned at the Baird Creek Bridge crossing, but would involve approximately \$35,000 of Port Renfrew water main relocation to facilitate the works. Staff advised MOT that the utility does not currently have sufficient funds, or available resources to perform the work within the prescribed window of opportunity. The planned works have been postponed until the summer of 2010. Staff will address the funding shortfall with the PRUSC at the 2010 budget meeting in November 2009 and will propose partial MOT funding to offset community hardship. The current available contingency budget under the service is approximately \$32,000.

#### Water Budget – Port Renfrew Water

The budget for 2009 opened with a carry forward balance of \$29,716. A 2007 deficit reflected the additional costs associated with the extensive storm activity through the winter of 2006. A portion of these funds were recovered from the Provincial Emergency Program in 2007. With limited emergency work required for the remainder of 2008, the year ended with a budget surplus of \$29,716. The variation in the annual budget has been insufficient to result in large swings in user fee or parcel tax as future capital works need to be considered given the condition of the aging infrastructure. In 2008, an additional two parcels were added to the system which will be reflected in the 2009 budget.

There will be upcoming long-term costs for replacement of the old asbestos cement mains in the Beach Camp area, Upper Camp area and the feed line along Parkinson Road. Properties should be metered in future to allow better realization of leaking private side piping, and work towards less loss of water through leakage. This will suggest that additional revenue from new properties entering the area should be set aside to reserve funds for this purpose.

The user fee and the parcel tax for 2009 remained essentially the same as 2008.

#### Water Budget – Snuggery Cove

The Snuggery Cove budget recovers the costs for debt servicing for the capital project. The annual costs will not vary in the budget; however, the recovery is based on a property value tax, not unlike the assessment of school taxes. As the value of individual properties change in relation to another, so will the annual share of those costs assigned to any single property. Portions of the TPP lands may take advantage of the Snuggery Cove water system in the future, which will decrease the individual parcel burden. In this regard it is probable that the CRD will extend the boundaries of Snuggery Cove to include additional parcels which would then assist the Snuggery Cove area with their debt servicing, providing a net reduction to existing property owners.

#### **PORT RENFREW LOCAL SEWER SERVICE AREA**

As with the water system, TPP (RTown) is also interested in participating with their new properties in the Port Renfrew sewer local service area. As with the water system, CRD engineers have been working with the developer to identify the works necessary for this arrangement to take place.

It is likely the project would be phased much like the water servicing plans. The initial phase includes up to 30 new strata housing units which are proposed to be added to the present sewer local service area, with service provided from the existing treatment works, but only after an amended permit is granted, dependent on minimizing the amount of inflow and infiltration (I & I) into the sewer system.

Works beyond these first 30 units will require the following:

1. Construction of a new wastewater outfall to replace the existing. The new outfall would be of sufficient capacity to handle flows from the proposed development, the existing Beach Camp development and future RTown lands when serviced in Snuggery Cove. The outfall would extend far out into the bay and not be confined by the river as is currently the case.
2. Construction of a new wastewater treatment facility. The new facility will include sewage screening removal and compaction, membrane bioreactor treatment, sludge thickening and ancillary electrical, control and maintenance works. The facility would be located on a parcel of land sufficient in size to allow future expansion. The plant design will allow for modular expansion as the development grows.
3. On completion of the new plant, an interconnection from the existing treatment facility to the new facility would be constructed. The existing Beach camp plant would be taken out of service and a new lift station and force main built to redirect flows to the new facility.

Total cost of the upgrade works is in the order of \$4 million.

RTown will also be required to construct all sewer collection system components for the development as it proceeds. On completion, the new system would be turned over to CRD to operate as an extended Port Renfrew sewer system.

As with the water system, servicing bylaws and a Memorandum of Understanding (MOU) have been finalized and will be presented following the 2009 AGM for the committee approval. The documents would then be presented to the Electoral Area Services Committee prior to going to the CRD Board for their review and approval.

### Sewer System Operations

The Port Renfrew sewer system includes a gravity collection system of 1,850 meters and a treatment plant, which currently serves 82 properties. Sewage is treated at the extended aeration treatment plant with treated effluent discharged to Port San Juan through an 81 meter long outfall. Plant operation is monitored daily by CRD local operators, as well as electronically through a Supervisory Control and Data Acquisition (SCADA) system. The treatment plant remains operational during power outages through a diesel powered back-up generator.

The operation of the treatment plant is authorized by the Ministry of Environment under the provisions of the Waste Management Act under Permit Number PE-00312. Effluent from the plant is sampled and analyzed monthly by staff. The effluent is monitored for the following conventional parameters: flow, total suspended solids (TSS), biochemical oxygen demand (BOD), carbonaceous BOD and fecal coliform bacteria. Ammonia and pH is also measured at the plant. It has been noticed, that with the installation of the new flow meters at the plant, recorded flows have increased over 1997-2006 data. This is consistent with CRD experience at other facilities where newer, more accurate flow meters have produced higher readings than the old methods. The plant has remained in permit compliance this year to date, however, low pH and higher mixed liquor suspended solids values during the summer months (during the times when the sewage is most concentrated), indicate plant performance is decreasing, due to the inability to waste sludge more frequently because of the current plant configuration. In order to increase the sludge wasting frequency, additional sludge storage will be required on-site, to supplement the existing 9-cubic

meter tank, or alternatively, a sludge thickener could be installed at the plant to reduce the sludge volume. Additional sludge storage alone would result in increased hauling and disposal costs. CRD staff will continue to monitor effluent quality prior to recommending upgrades to the current plant. Also, with respect to permit compliance, the plant is periodically out of compliance due to an exceedance of maximum daily allowable flow. Approximately 21,700 cubic meters of sewage was treated in 2008.

One of the key flow inputs to the plant during wet weather is stormwater that enters the sewer system through direct connections (inflow) or through cracked pipes and manholes (infiltration). Based on flow data, it is known that the wet weather daily flow to the plant is approximately four to five times the dry weather daily flow. In order to determine sources of I&I, smoke testing of the gravity sewer system was completed in 2008. Most of the deficiencies identified related to private plumbing and drainage systems, however, one MOT catch basin in Beach Camp was found to be a major contributor by draining directly into the sewer system. The homeowners were advised by letter to obtain a plumbing permit and promptly correct the deficiencies.

CRD worked with MOT in 2009 to implement storm water improvements such that two properties on Tsonoqua Drive now have their storm water flows diverted away from the sewer system without creating additional local flooding problems. Staff liaised with MOT in the installation of a perforated storm drain in the rear yards of the two Tsonoqua Drive properties (#16950 and #16954) to divert artesian flows and surface storm water directly to a storm outfall. The property owners who directed the majority of inflow into the sewer were notified to rectify the problem by disconnecting their rain water leaders and surface drains from the sewer system. MOT is aware of the need for a storm drain system in Beach Camp and will consider such works for MOT capital funding in 2010.

RTown is in preparation to hire a Closed Circuit Television Viewing (CCTV) contractor to locate sources of inflow and infiltration in the entire Port Renfrew sewer system in the hopes of minimizing the superfluous storm water flows, and in so doing, recovering original design capacity in the system for use for their Phase 1 works. The reduction of inflow and infiltration should satisfy the MOE concerns in granting an amended permit for the existing wastewater treatment plant to accommodate the additional 30 lots planned in RTown's land development.

Operationally, maintenance flushing of the gravity sewer system is scheduled for early November. The netting installed over the aeration tank and clarifier at the plant continues to catch falling leaves from adjacent trees to prevent them from entering the tanks and minimizes their interfering with the treatment process. CRD staff entered into discussion with the property owner of 16988 Tsonoqua Drive to negotiate removal of the trees and replacement with a landscape buffer in 2010.

One new sanitary sewer service was installed in the Beach Camp area in 2009.

#### Sewer Budget

The sewer budget has been carrying forward a small surplus of funds. The surplus was generated some years ago when contingency funds were provided against a possible expenditure to dig out the wastewater outfall. While operating costs have increased with inflation, the surplus was used to offset normal increases in user fees. The balance carried forward to the 2008 budget amounted to \$2,015. With additional expenditures for the operation in 2008, the budget surplus at year-end was reduced to \$1,952. The 2008 operating budget was increased by about 3.8% to provide for normal inflation, increased fuel cost and additional manpower requirements for the aging system. Consequently, with no significant surplus carry forward, the user fee and parcel tax for the sewer utility rose significantly in 2008 for the first time since 2003.

The Port Renfrew wastewater treatment plant has shown its age for some time. There is considerable benefit to the sewer area if the plant is replaced as a component of the servicing by the RTown development. Staff will however be discussing with the PRUSC, as part of the 2010 budget, the need to

develop a fall back program to allow incremental upgrades of the facility commencing in 2011. As has been noted, the plant requires additional sludge storage and thickening to maintain effluent quality, and there is concern that any additional electrical equipment will prompt a need to bring the service and electrical equipment up to current code. The PRUSC could agree to fund these costs on an annual year-to-year basis or through a long-term borrowing bylaw.

It is anticipated that increased operating costs would be associated with the new sewage treatment facility. Operating costs to the present sewer service area users may increase during the initial years of operation of the replacement plant, but will be mitigated as new parcels and connections are added to the system. The substantial increase of parcels into the extended service area would minimize or offset substantial increases to the present users.



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Gary Plevin, ASCT  
Engineering Technician 5

GP:ls  
Attachments:

## CAPITAL REGIONAL DISTRICT

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### WATER REVENUE FUND

### STATEMENT OF FINANCIAL ACTIVITIES (UNAUDITED)

For the year ended December 31, 2008

	Port Renfrew Water Supply
<b>REVENUES</b>	
Transfers from government	\$ 38,394
Sale of services	39,051
Other revenue from own sources:	
Other licenses and permits	-
Interest earnings	575
Other revenue	5,937
Grants in lieu of taxes	51
	<u>84,008</u>
<b>EXPENDITURES</b>	
General government services	3,290
Other	55,807
Other fiscal services	271
	<u>59,368</u>
<b>NET REVENUES</b>	
<b>(EXPENDITURES)</b>	24,640
Transfers to own funds:	
Water Capital Fund	-
Reserve Funds	-
Equipment Replacement Fund	-
<b>CHANGE IN FUND BALANCE</b>	
Opening balance	5,076
<b>CLOSING BALANCE</b>	<u>\$ 29,716</u>



# CAPITAL REGIONAL DISTRICT

## SEWER REVENUE FUND STATEMENT OF FINANCIAL ACTIVITIES (UNAUDITED) For the year ended December 31, 2008

	Port Renfrew Sewerage System
<b>REVENUES</b>	
Transfers from government	\$ 29,047
Sale of services	29,208
Other revenue from own sources:	
Building permits	-
Interest earnings	194
Other revenue	-
Grants in lieu of taxes	43
	<u>58,492</u>
<b>EXPENDITURES</b>	
General government services	2,330
Other	56,048
Other fiscal services	177
Recovery	-
	<u>58,555</u>
<b>NET REVENUES</b>	
<b>(EXPENDITURES)</b>	<b>(63)</b>
Transfers to own funds:	
Sewer Capital Fund	-
Reserve Funds	-
Equipment Replacement Fund	-
Transfers from own funds:	
Sewer Capital Fund	-
Reserve Funds	-
<b>CHANGE IN FUND BALANCE</b>	<b>(63)</b>
Opening balance	2,015
<b>CLOSING BALANCE</b>	<u><u>\$ 1,952</u></u>

**CAPITAL REGIONAL DISTRICT**

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**GENERAL REVENUE FUND  
STATEMENT OF FINANCIAL ACTIVITIES (UNAUDITED)  
PROTECTIVE SERVICES - GENERAL  
For the year ended December 31, 2008**

	Port Renfrew Street Lighting
<b>REVENUES</b>	
Transfers from government	\$ 1,840
Sale of services:	
Other sales	1,850
Other revenue from own sources:	
Interest earnings	1
Other revenue	-
Grants in lieu of taxes	-
	<u>3,691</u>
<b>EXPENDITURES</b>	
General government services	360
Other	3,522
	<u>3,882</u>
<b>EXCESS OF REVENUES OVER EXPENDITURES</b>	(191)
Transfers to own funds:	
General Capital Fund	-
Equipment Replacement Fund	-
Debt charges:	
Interest on temporary borrowing	57
<b>CHANGE IN FUND BALANCE</b>	(248)
Opening balance	(827)
<b>CLOSING BALANCE</b>	<u>\$ (1,075)</u>