



Making a difference...together

**PORT RENFREW UTILITY SERVICES COMMITTEE
2008 OPERATIONS REPORT
23 OCTOBER 2008**

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

PORT RENFREW / SNUGGERY COVE STREET LIGHTING

This past year, Capital Regional District (CRD) staff inquired of BC Hydro how much it would cost for BC Hydro to install and operate additional street lights in the Snuggery Cove area. The request was generated by the fire chief who was concerned for the safety of fire fighters using the new hydrants along Parkinson Road on dark and rainy nights. Having received costs from Hydro, CRD staff generated a petition to circulate to Snuggery Cove residents to see if they wished to support the annual costs for the new lights. As most now know, BC Hydro went ahead and installed the new lights without a formal request from CRD. To date, CRD has not been charged for the new lights, however it is assumed that in due time, the additional cost for service will be billed to the existing Port Renfrew street light area. In advance of that date, CRD staff will forward to the CRD Board a new Bylaw amendment to expand the Port Renfrew street lighting area to include the Snuggery Cove area.

PORT RENFREW WATER LOCAL SERVICE AREA

Water Area Expansion

Three Point Properties Ltd. (TPP) have acquired significant land holdings, adjacent to the Snuggery Cove and Port Renfrew water local service areas, from Timberwest. TPP has been working with staff at the CRD and the Port Renfrew Utility Services Committee to evaluate the requirements for and benefits of serving the new lands from an expanded Port Renfrew water system and an expanded Port Renfrew sewer system.

The Pacheedaht First Nation have approached CRD staff to determine the general requirements for extension of the Port Renfrew water system to the Pacheedaht First Nation's lands.

Three Point Properties Ltd. Proposal

To date, the proposal from TPP stands as follows:

1. TPP will develop a new groundwater well of sufficient capacity for their long term requirements (this work now complete).
2. TPP will negotiate and pay the costs of acquisition of a new statutory right of way for the new TPP 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.
3. TPP to fully fund a new water booster station and water treatment facility to replace the existing pump station. The new station to include new pumps, hydrogen sulfide removal, primary and secondary disinfection system, standby power system, updated electrical service and 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.

5. Install a new local storage reservoir, booster station with standby power, and a new main to lift water from the existing main to the new reservoir location.
6. Install a new pressure reduction station to ensure properties in Beach camp are not over pressurized.
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 infrastructure not located on highways right of way.

Pacheedaht First Nation Proposal

Conditional on the TPP proposal being accepted by the community, the Pacheedaht First Nation is considering a proposal to upgrade Port Renfrew water system components as follows:

1. Replace the watermain from the new TPP booster station to the intersection of Parkinson and Deering Roads.
2. Participate with TPP to install the main to the relocated reservoir site.
3. Supply and install a second water reservoir tank at the new reservoir site.
4. Extend a new water main along Deering Road to the boundary of Gordon River Indian Reserve #1.
5. Provide a metering point at the boundary of the Port Renfrew water system.
6. Turn over all works to the CRD to operate as part of the Port Renfrew water system.

The First Nation would also need to extend water from their boundary to their existing water system and to upgrade the existing system with the installation of water meters to each dwelling unit, upgrade of valves as required, decommission and disconnect the existing water supply wells and test, maintain or replace hydrants and necessary.

Negotiations are underway between the Pacheedaht's consultants and CRD engineers and Indian and Northern Affairs engineers at this time. If the components of the proposal are acceptable to INAC, the Pacheedaht would formally approach the CRD and the Port Renfrew Utility services committee to move along the proposal to an agreement stage.

New Water Service Area

CRD staff and TPP are reviewing with the Province and CRD solicitors the concept of creation of a new Port Renfrew water service area #2, which would encompass TPP lands not currently in either water area. There are several potential 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 within the new area, and also to make improvements to the existing water system, not unlike the model used by Snuggery Cove. Unlike the Snuggery Cove/Port Renfrew model, the expansion of Port Renfrew water area #1 won't take in the new lands for purposes of operation and maintenance until such time as 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 hence 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 or the Board and Pacheedaht First Nation. There remains some work to be completed in this area in advance of either the developer or the First Nation to return to the committee.

Water System Operations 2007/2008

In March of this year, contractors for TPP, while land clearing, damaged the existing water main downstream of the reservoir. The Port Renfrew operator isolated the break and CRD emergency repair contractors undertook repairs. Water service was restored by early evening the day of the break. The developer was invoiced \$2,894.47 to cover the cost of the repair work.

Near the end of July, the Pacheedaht First Nation experienced problems with the supply of water to the First Nation's system. The Pacheedaht requested water on an emergency basis from Port Renfrew. Authorization was provided by CRD to provide water to Pacheedaht until their system problems could be rectified. CRD incurred additional labour costs to monitor and operate the Port Renfrew system during the emergency supply to Pacheedaht. The Pacheedaht First Nation was invoiced \$721.21 to cover the additional labour costs. The water itself was provided at no charge.

Operationally, in the spring, the fire hydrants were inspected and operated to ensure they were operational for the summer months.

Annual fire hydrant maintenance, flushing and valve operation is scheduled for early November

Water Budget – Port Renfrew Water

The budget for 2007 opened with a deficit of \$9,150 carried forward from 2006. The 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 2007, the year ended with a budget surplus of \$5,076. The variation in the annual budget has been insufficient to result in large swings in user fee or parcel tax and has been offset largely by additional users added to the system. In 2008, an additional two parcels were added to the system which will be reflected in the 2009 budget.

The water area, if the two capital upgrade projects are completed, will see a largely reconstructed system. There will however be long term costs for replacement of the old asbestos cement mains in place in the Beach Camp area and Upper Camp and all properties should be metered in future. 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 2008 remained essentially the same as 2007.

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, hence 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 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 SEWER SYSTEM

As with the water system, TPP 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. The initial phase includes up to 30 new housing units which are proposed to be added to the present sewer local service area, with service provided from the existing treatment works.

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 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. Interconnection from the existing treatment facility to the new facility. On completion of the new plant, the existing plant would be taken out of service and the flows redirected to the new facility.

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

The developer 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 there remains some challenges to completion of a suitable agreement and servicing bylaws in advance of the committee and CRD Boards review and approval.

Sewer System Operations

The Port Renfrew sewer system includes a gravity collection system and treatment plant, which serves 82 properties. Sewage is treated at the extended aeration treatment plant with treated effluent is discharged to Port San Juan through an 81 metre long outfall. Plant operation is monitored daily by one of the two local operators, as well as electronically through a SCADA (Supervisory Control and Data Acquisition) system. The treatment plant remains operational during power outages through the diesel powered 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. 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 decreased 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 recommending upgrades to the current plant. Also, with respect to permit compliance, the plant is periodically out of compliance due to exceedance of maximum daily allowable flow. 21,000 cubic meters of sewage was treated in 2007.

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 June 2008. Most of the deficiencies identified were related to private plumbing and drainage systems. The homeowners were advised by letter to obtain a plumbing permit and correct the deficiencies. CRD staff are working with the Ministry of Transportation to implement storm water improvements such that these properties can be taken off the sewer system without creating additional local flooding problems.

Three new sewer connections were added to service the new development in Beach Camp.

Operationally, maintenance flushing of the gravity sewer system is scheduled for early November. Netting was installed over the aeration tank and clarifier at the plant at the end of the summer, to catch falling leaves from adjacent trees and prevent them from entering the tanks and interfering with the treatment

Sewer Budget

The sewer budget has been carrying forward a surplus of funds for some years now. 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 has been used to offset normal increases in user fees. The balance carried forward to the 2007 budget amounted to \$7,448. With additional expenditures for the operation in 2007, the budget surplus at year-end was reduced to \$2,015. The 2008 operating budget was increased by about 3.8% to provide for normal inflation, increased fuel cost and additional manpower requirements for the system. As a consequence, 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 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 TPP development. Staff will however be discussing with the committee, as part of the 2009 budget, the need to develop a fall back program to allow incremental upgrades of the facility commencing in 2010. 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 code. The committee could agree to fund these costs on an annual year to year basis or through a long term borrowing.

GH:ls

Attachments: 3

CAPITAL REGIONAL DISTRICT

**WATER REVENUE FUND
STATEMENT OF FINANCIAL ACTIVITIES (UNAUDITED)
For the year ended December 31, 2007**

	Port Renfrew Water Supply
REVENUES	
Transfers from government	\$ 37,705
Sale of services	36,597
Other revenue from own sources:	
Interest earnings	505
Other revenue	1,826
Grants in lieu of taxes	626
	<u>77,259</u>
EXPENDITURES	
General government services	3,290
Other	59,436
Other fiscal services	307
	<u>63,033</u>
NET REVENUES (EXPENDITURES)	14,226
Transfers to own funds:	
Water Capital Fund	-
Reserve Funds	-
Equipment Replacement Fund	-
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CHANGE IN FUND BALANCE	14,226
Opening balance	(9,150)
CLOSING BALANCE	\$ 5,076

CAPITAL REGIONAL DISTRICT

SEWER REVENUE FUND STATEMENT OF FINANCIAL ACTIVITIES (UNAUDITED) For the year ended December 31, 2007

	Port Renfrew Sewerage System
REVENUES	
Transfers from government	\$ 24,887
Sale of services	23,783
Other revenue from own sources:	
Building permits	-
Interest earnings	294
Other revenue	-
Grants in lieu of taxes	595
	<u>49,559</u>
EXPENDITURES	
General government services	2,330
Other	52,558
Other fiscal services	104
Recovery	-
	<u>54,992</u>
NET REVENUES	
(EXPENDITURES)	(5,433)
Transfers to own funds:	
Sewer Capital Fund	-
Reserve Funds	-
Equipment Replacement Fund	-
Transfers from own funds:	
Sewer Capital Fund	-
Reserve Funds	-
CHANGE IN FUND BALANCE	(5,433)
Opening balance	7,448
CLOSING BALANCE	<u>\$ 2,015</u>

CAPITAL REGIONAL DISTRICT

GENERAL REVENUE FUND STATEMENT OF FINANCIAL ACTIVITIES (UNAUDITED) PROTECTIVE SERVICES - GENERAL For the year ended December 31, 2007

	Port Renfrew Street Lighting
REVENUES	
Transfers from government	\$ 1,841
Sale of services:	
Other sales	1,759
Other revenue from own sources:	
Interest earnings	13
Other revenue	-
Grants in lieu of taxes	-
	<u>3,613</u>
EXPENDITURES	
General government services	360
Other	4,013
	4,373
EXCESS OF REVENUES OVER EXPENDITURES	
	(760)
Transfers to own funds:	
Equipment Replacement Fund	-
Debt charges:	
Interest on temporary borrowing	15
	<u>15</u>
CHANGE IN FUND BALANCE	
	(775)
Opening balance	(52)
CLOSING BALANCE	<u>\$ (827)</u>