



**STAFF REPORT TO SAANICH PENINSULA WATER COMMISSION
MEETING OF THURSDAY, 21 FEBRUARY 2008**

SUBJECT WATER MAIN BREAKS – TOWN OF SIDNEY

PURPOSE

To provide follow-up information to the Saanich Peninsula Water commission regarding the Town of Sidney water main breaks that occurred on 04 October 2007.

BACKGROUND

On 04 October 2007 the Town of Sidney experienced a large water main break in the 10100 block of McDonald Park Road. This break was isolated by Sidney public works staff; however Sidney subsequently received more calls identifying five additional breaks distributed randomly throughout the town. The Capital Regional District (CRD) Pressure Reducing Valve (PRV) at Mills Road had initially operated as intended; however after Sidney staff had isolated the initial break, the PRV allowed the pressure to increase to approximately 95 PSI for approximately 75 minutes. It has been agreed by Sidney and CRD staff that this higher pressure likely contributed to the five water service leaks. It should be noted that this higher pressure of 95 PSI is low compared to many municipal water systems.

In January of this year CRD staff met with Town of Sidney staff to review the incident and to discuss any requirements for changes in operating or communications protocols.

DISCUSSION

With regard to the CRD Supervisory Control and Data Acquisition (SCADA) system alarms currently in place at the Mills Road PRV, it was agreed that these are programmed appropriately to issue an alarm to the CRD duty operator if the pressure or flow rate delivered to the Town of Sidney fall outside predetermined ranges.

Staff also considered a change in operating protocols in the event of a similar incident in the future. The Town of Sidney receives its bulk water supply at controlled pressures from the CRD at two locations: from MacTavish Reservoir via Canora Road and through a PRV at Mills Road and McDonald Park Road. CRD could immediately close the Mills Road PRV in the event of high pressure and direct all flows to Sidney via Canora Road; however due to the high likelihood of turbidity resulting from flow reversals within the Town, this option has not been implemented.

Communications between CRD operators and Sidney public works staff on the day of the incident was agreed to be satisfactory. A communications protocol for such events was established between CRD staff and the three municipalities in 1997 and is essentially still appropriate and in place today. This protocol will be brought up-to-date and recirculated to municipal staff.

With regard to a risk assessment, the CRD commissioned Levelton & Associates to conduct a two-phase underground corrosion study in 1990 and 1993. The purpose of the study was to assess the corrosiveness of the soils in the vicinity of the water supply system, to assess the status of the existing cathodic protection and life expectancy of the anodes and to inspect various pipe sections for integrity and life expectancy. The study results indicate that a number of anodes throughout the system are due for replacement.

It is proposed that a similar survey, including anode replacement and targeted pipe section inspections, be conducted in 2008. This work is estimated to cost \$30,000 and will be funded from the core budget. If substantial capital upgrades are necessary, these projects will be identified in the 2009-2013 capital plan.

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Cost savings for the study may be realized if it is undertaken in partnership with the Town of Sidney, which Town staff are currently considering.

A map, as requested by the commission, showing CRD responsibility for the water system on the peninsula is attached as Appendix A.

FINANCIAL IMPLICATIONS

Staff will conduct a corrosion study this spring, estimated to cost \$30,000, funded from the core budget. If substantial capital upgrades are necessary, these projects will be identified in the 2009-2013 five-year capital plan.

SUMMARY

CRD staff have met with Town of Sidney staff to review the incident of 04 October 2008 with regards to operating and communications protocols. A corrosion study of the CRD water supply system will be initiated this spring which will include replacement of existing anodes that have reached the end of their useful life.

RECOMMENDATION

That the Saanich Peninsula Water Commission receive this report for information.

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