



City of Richmond

Report to Committee

To:	General Purposes Committee	Date:	February 12, 2007
From:	Robert Gonzalez, P.Eng. Director, Engineering	File:	10-6525-08-03/2007-Vol 01
Re:	Temporary Water Supply Alterations - Canada Line		

Staff Recommendation

That the "Temporary Water Supply Alterations – Canada Line" report from the Director, Engineering be received for information.

Robert Gonzalez, P.Eng.
Director, Engineering
(4150)

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CONCURRENCE OF GENERAL MANAGER		
REVIEWED BY TAG	YES <input checked="" type="checkbox"/> <i>sw</i>	NO <input type="checkbox"/>
REVIEWED BY CAO <i>parting</i>	YES <input checked="" type="checkbox"/> <i>de</i>	NO <input type="checkbox"/>

Staff Report

Origin

Canada Line construction along Cambie Street in Vancouver requires relocation of one of the main GVRD water supply lines to Vancouver and Richmond. Richmond, GVRD, Vancouver, and Canada Line staff met to discuss the implications of the temporary water supply alterations to Richmond and south Vancouver.

The purpose of this report is to provide Council with an update on the forthcoming works and associated issues.

Analysis

Richmond receives its potable water from GVRD water transmission main lines (see attached plan). Water is subsequently distributed by Richmond for consumption. While Richmond's water distribution grid is robust, the ability to distribute potable water or provide water for fire protection is contingent up water supply from the GVRD.

The Canada Line requires that two sections of water transmission main lines be relocated on Cambie at 41st and at 49th in order to allow for construction of the Canada Line tunnel. Recognizing Richmond's significant water demand during the day, alterations to the GVRD's water transmission main lines will take place during the night, between 10:00 pm and 6:00 am, which is when the demand for water is at its lowest point. Approximately 5 such water supply alterations will be required in total in order to construct the necessary water bypasses. Staff have been advised that these works will likely take place on consecutive Saturdays commencing February 17, 2007, subject to meeting the necessary milestones.

In summary, for the forthcoming five (10:00 pm to 6:00 am) water supply alteration events, water will be supplied to Richmond through Vancouver's water distribution network and also through the GVRD transmission main line at the south end of No.5 Road from Delta. While there will be sufficient water for regular consumption, the volume of water available to Richmond will be reduced during the anticipated five events. After 6:00 am, upon concluding each event, water supply through the Cambie transmission main line will be restored.

To mitigate risk during each event, staff are developing a contingency plan that will include:

- Standby water trucks
- Water bladders at strategic locations
- Pressure monitors throughout the City's water distribution network
- Standby Fire Rescue barges from the City of Vancouver

A team of Fire Rescue, Emergency Programs, Public Works, and Engineering staff has been assembled to work with the various departments and stakeholders such as Richmond Coastal Health and YVR.

In addition, it is anticipated that with each event, turbid water will enter Richmond's water distribution network as a result of a flow reversal in the GVRD water transmission main lines.

Richmond Coastal Health staff are working with the City to monitor the quality of the potable water and address any Health related concerns should they arise.

Financial Impact

Additional equipment and labour costs incurred by Richmond as a result of the foregoing works will be paid by Canada Line.

Conclusion

Construction of the Canada Line is driving the alterations to the GVWD water supply transmission line. While staff are developing a contingency plan to mitigate risk associated with the alteration of the water supply to Richmond, staff will also be advising Canada Line of Richmond's respective concerns.

A handwritten signature in black ink, appearing to read 'R. Gonzalez', with a stylized flourish at the end.

Robert Gonzalez, P.Eng.
Director, Engineering
(4150)

GVRD Water Mains

- Watermains - GVRD
- Watermains - CITY
- Streets
- Island Boundary

Map Creation Date: February 13, 2007
 Map Created By: dmcgoc

Note:
 The information shown on this map is compiled from various sources and the City makes no warranties, expressed or implied, as to the accuracy or completeness of the information.
 Users are reminded that lot sizes and legal descriptions must be confirmed in the Land Title Office in New Westminster.
 This map is for informational purposes only and is not to be used for any other purpose.
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 Glencoe Richmond
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