



## City of Richmond

## Report to Committee

**To:** Public Works and Transportation Committee      **Date:** November 15, 2006  
**From:** John Irving, P.Eng.  
Manager, Building Approvals      **File:**  
**Re:** Dual Flush Toilets

### Staff Recommendation

That the City's current policy and practice with regard to toilet regulation remain unchanged.

John Irving, P.Eng.  
Manager, Building Approvals  
(4140)

FOR ORIGINATING DEPARTMENT USE ONLY					
<b>ROUTED TO:</b>		<b>CONCURRENCE</b>		<b>CONCURRENCE OF GENERAL MANAGER</b>	
Engineering .....		Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>
Water .....		Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>
Sewerage & Drainage .....		Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>
<b>REVIEWED BY TAG</b>		YES		NO	
		<input checked="" type="checkbox"/>	GIS	<input type="checkbox"/>	
<b>REVIEWED BY CAO</b>		YES		NO	
(ACTING)		<input checked="" type="checkbox"/>		<input type="checkbox"/>	

## **Staff Report**

### **Origin**

At the Public Works and Transportation Committee meeting of September 20, 2006, the committee made the following referral motion:

***“That staff investigate the feasibility of incorporating requirements for dual flush toilets into new home building construction in specific areas and/or commercial and industrial developments.”***

This report is provided in response to the referral.

### **Findings Of Fact**

In March 2005, the Provincial Ministry of Community, Aboriginal and Women's Services approved changes to the Water Conservation Plumbing Regulation that requires the use of 6 litre toilets for new installations in the GVRD, effective September 30, 2005. Building Approvals Department staff have been enforcing this new regulation for the last year.

Toilets account for approximately 26% of indoor water use in single family residential homes. Conventional toilets (13 litre and higher) use over twice as much water per flush as a 6 litre toilet, indicating that there is potential to reduce indoor water use in homes by more than 13% through the use of 6 litre toilets instead of conventional 13 litre toilets. Non-residential uses would see a wider range of water savings based on the specific use of the building, but generally, toilets account for a less significant proportion of total water use in non-residential buildings. Users who are metered for water will directly benefit from 6 litre toilet installation, as they pay for water based on what they use, and they should use less with a 6 litre toilet installed in their house.

Dual-flush toilets utilize two flush options: a 6 litre full flush for solids and a 3 litre flush for liquid waste. A study completed by CMHC in 2002 concluded that for all uses, dual flush toilets will use 26% less water than 6 litre toilets. Based on this, the replacement of a 6 litre toilet with a dual flush toilet in a single family home would further reduce total indoor water use by approximately 3%.

### **Analysis**

Requiring the installation of dual flush toilets as a regulation is not recommended at this time for a number of reasons:

1. The additional water savings provided by dual flush toilets over the currently required 6 litre toilets is much smaller than the savings provided by moving to the 6 litre regulation from the 13 litre.

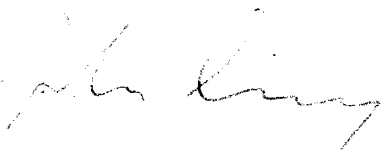
2. The construction and plumbing industry is still in an adjustment phase in responding to the new 6 litre toilet regulation that has been effective for just over a year. Bringing in a new regulation at this stage would place further stress on this industry and possibly introduce confusion, making compliance challenging.
3. Dual flush toilets are currently being installed voluntarily in all settings and the use of dual flush toilets will likely grow without regulation.
4. Regulation of toilet installation falls under the building code and is subject to concurrent authority with the province. As such, any City bylaw requiring dual flush toilets would require provincial approval. The Province is continuing to promote the 6-litre requirement through the Water Conservation Plumbing Regulation and hopes to bring all communities in BC under this regulation. In line with their consistency objectives, the Province has indicated that they will not be supporting any moves beyond the 6-litre regulation in the foreseeable future.

### **Financial Impact**

None

### **Conclusion**

The recent adoption of the 6 litre toilet requirement will introduce substantially improved water savings to users in the City. Attempting to move to a dual flush toilet requirement at this time presents challenges for implementation and Provincial approval and would provide minimal additional water savings.



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