

**ENVIRONMENT COMMITTEE**

**A**

*HIS WORSHIP, THE MAYOR  
AND COUNCILLORS*

**SUBJECT: PLUMBING REGULATION – DUAL-FLUSH TOILETS**

**RECOMMENDATION:**

1. THAT Council request the Minister Responsible for Housing to include consideration of regulations to establish requirements for dual-flush toilets within the review process for the proposed BC Green Building Code.

**REPORT**

The Environment Committee, at its Open meeting held on 2007 May 08, received and adopted the *attached* report providing information on regulation of dual-flush toilets under the BC Building Code, and proposing that the Province be requested to include consideration of regulations to establish requirements for dual-flush toilets within the review process for the proposed BC Green Building Code.

Respectfully submitted,

Councillor Dan Johnston  
Chair

Councillor Pietro Calendino  
Vice Chair

Councillor Lee Rankin  
Member

COPY – CITY MANAGER  
DIRECTOR PLANNING & BUILDING  
DIRECTOR ENGINEERING  
CHIEF BUILDING INSPECTOR

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**TO:** CHAIR AND MEMBERS  
ENVIRONMENT COMMITTEE

**DATE:** 2007 May 02

**FROM:** DIRECTOR PLANNING & BUILDING

**FILE:** PA 41500-20  
*Reference: Building Regulations*

**SUBJECT: PLUMBING REGULATION – DUAL-FLUSH TOILETS**

**PURPOSE:** To provide information on regulation of dual-flush toilets under the BC Building Code.

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**RECOMMENDATION:**

1. **THAT** Council request the Minister Responsible for Housing to include consideration of regulations to establish requirements for dual-flush toilets within the review process for the proposed BC Green Building Code.

**REPORT****1.0 INTRODUCTION**

At its 2007 February 13 meeting, the Environment Committee received a memorandum from CivicInfo BC providing a copy of a letter from the City of Richmond to the Honourable Rich Coleman, Minister Responsible for Housing, requesting that the province consider establishing dual-flush toilets as the minimum requirement in the BC Building Code. The Environment Committee referred this item of correspondence to staff for review.

This report provides an overview of the current low-flush toilet requirements of the BC Building Code and proposes that the province be requested to include consideration of regulations to establish requirements for dual-flush toilets with the review process for the proposed BC Green Building Code.

**2.0 LOW-FLUSH TOILETS**

Around the home, Lower Mainland residents typically use more than 340 litres of water per day for such activities as washing dishes and clothes, bathing, and flushing toilets. Toilets alone typically account for about 30% of total residential indoor water use. The

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use of low-flush 6-litre toilets has the potential of save approximately 15% of total indoor residential water use.

Dual-flush toilets, first developed in the early 1980's, provides for further reduction in water use by using 6 litres of water to flush solid waste and 3 litres of water to flush liquid waste. A study completed by CMHC in 2002 indicated that dual-flush toilets perform well in comparison to 6-litre and traditional 13-litre toilets in terms of water consumption rates. Dual-flush toilets can save an average of approximately 26% more water in comparison to single-flush 6-litre toilets. This represents a potential further savings of 4% in total residential indoor water use.

Based on the general benefits of dual-flush toilets to further conserve water, staff are generally supportive of the technology. There are a number of issues and concerns, outlined below, however, that would be more appropriately addressed through the development regulations for the use of dual-flush toilets at the provincial rather than the local level. Staff would note, that currently there is limited selection of dual-flush toilets on the market, and that these fixtures are currently priced at about twice the cost of low-flush toilets.

### **3.0 REGULATORY FRAMEWORK**

Prior to 2005, the BC Plumbing Code required conventional 13-litre toilets for all new installations in BC. The City of Vancouver, since 1994, has mandated the use of 6-litre low-flush toilets. In 2005 January, the Provincial Water Conservation Plumbing Regulation required the use of low-flush 6-litre toilets in the Capital Regional District. In 2005 September, the province extended this regulation to 17 additional geographical areas in the province, including the GVRD. The regulation was further applied to an additional 21 geographic areas in the BC Interior as of 2007 April 15.

Under the current Community Charter, local governments may, by bylaw, include technical standards such as mandating dual-flush toilets, which are additional to or different from the standards in the BC Building Code. This is, however, subject to concurrent authority which means that the bylaw must also be submitted to the Building Policy Branch for approval of the Minister Responsible for Housing. In general, the province has not typically approved local government regulations which are in addition to the BC Building Code in order to maintain a greater level of consistency across jurisdictions in BC which allows for greater efficiency and predictability for builders, the development industry and suppliers of building materials.

In the 2007 February 13 Throne Speech, the province announced an initiative for the development of a new unified BC Green Building Code in early 2008. The focus of the BC Green Building Code is to promote sustainability with one of the key objectives being water conservation through the required use of low-consumption fixtures. Staff expect

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that the province will promote the requirement for the use of 6-litre low-flush toilets on a provincial wide basis through the inclusion of this requirement in the proposed BC Green Building Code.

This provincial initiative will also provide an appropriate opportunity for the province to consider the expansion of the low-flush toilet requirement to include dual-flush toilets. Within this context and through the process of a broader provincial initiative, the province would be able to appropriately address issues that would typically arise from the introduction of new building regulations for dual-flush toilets in terms of:

- allowance for industry acceptance and adjustment to new requirements;
- creation of a larger market for suppliers of dual-flush toilets;
- delivery of information to the building supply market to ensure the availability of dual-flush toilets in a range of model types, styles and price points;
- resolution of particular application issues that may arise in terms of specialized needs such as handicapped accessible toilets; and
- creation of consistent regulations that would apply across local jurisdictional boundaries

With the establishment of the BC Green Building Code review process, staff anticipate that there would also be an opportunity for the public, development industry, and the City to provide further input on the inclusion of other green building approaches, technologies, and systems within the proposed Green Building Code. As further information becomes available on the process for creation of the BC Green Building Code, Building and Planning staff will undertake to appraise the Committee and Council of the specifics of the program and to review and provide comment on the content and scope of specific green building regulations proposed.

#### 4.0 CONCLUSION

Dual-flush toilet technology provides for additional water conservation benefits over and above the current 26% savings achieved from the recent introduction of regulations for low-flush toilets. The technology has also been generally proven to be effective in general application. Staff, however, would not propose that dual-flush toilets regulations be developed by Burnaby on its own given the issues of industry readiness, product availability and choice and other issues that would arise from development of a local regulation. Further, staff recognize that concurrent provincial approval would be required for a stand-alone Burnaby regulation.

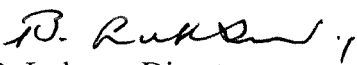
Staff would note, however, that the province's current proposal for development of a unified BC Green Building Code does provide an appropriate opportunity for the advancement of this and other green building approaches to the province for consideration as part of this overall initiative. Through the provincial review process, the

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province would be able to address issues around implementation and applicability in jurisdictions across the province.

As such, this report recommends that Council request the Minister Responsible for Housing to include consideration of regulations to establish requirements for dual-flush toilets within the review process for the proposed BC Green Building Code.

  
B. Luksun, Director  
PLANNING & BUILDING

PS:LP:sa

Copied to: City Manager  
Chief Building Inspector  
Director Engineering  
City Clerk

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