



**City of Richmond**

**Report to Committee**

To: Public Works and Transportation Committee *To Public Works & Transportation* Date: March 9, 2005 *Mar 23, 2005*  
 From: Greg Scott, P. Eng. LEED™ A.P. File: 10-6650-01  
 Director of Operations  
 Re: Annual Rain Barrel Program

**Staff Recommendation**

That an annual 50% cost subsidized rain barrel distribution program be implemented by the City to increase water conservation awareness and complement the residential metering program.

*[Signature]*  
 Greg Scott, P. Eng. LEED™ A.P.  
 Director of Operations  
 (1206)

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<b>ROUTED TO:</b>		<b>CONCURRENCE</b>		<b>CONCURRENCE OF GENERAL MANAGER</b>	
Emergency and Environmental Programs	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	<i>[Signature]</i>		
Budgets .....	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>			
Engineering .....	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>			
<b>REVIEWED BY TAG</b>	YES	NO	<b>REVIEWED BY CAO</b>	YES	NO
	<i>[Signature]</i> <input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

## Staff Report

### Origin

The purpose of this report is to review the 2004 pilot rain barrel program and seek approval to continue the program at an increased level. At the August 30, 2004 meeting of Council, a pilot rain barrel program was approved with a 50 % cost subsidized City rain barrel initiative. This program was successfully implemented at the recycling depot in the winter of 2004.

### Analysis

A total of 75 rain barrels were sold in less than a 2 month period and continued requests from the public are still being received. This response was surprising considering the program was initiated in the winter due to delivery reasons. There were two types of barrels offered, a \$90 priced barrel specially designed for the purpose, of which 25 were purchased, a \$20 priced reused barrel, of which 55 were purchased. In general discussions with our customers, staff concluded that there is a continued demand to offer both types of barrels.

The idea behind the rain barrel initiative is to draw attention to residential irrigation practices, which accounts for 40% of domestic water consumption during summer (June to September). This is the area in which the City's Drinking Water Shortage Response Plan (Sprinkling Regulations) is focusing its attention and efforts for water conservation.

As a preferred customer to Flexahopper, we are purchasing directly from the manufacturer avoiding handling costs of local distributors.

Rain barrels would provide an alternative to using treated drinking water for irrigation, and give our residents the ability to take responsible action in discretionary water use, resulting in reduced potable water use.

### Barrels Offered

Staff undertook a review of rain barrel programs offered by other Cities. The average capacities of the rain barrels offered are between 202 litres (50 imperial gallons) to 341 litres (75 imperial gallons). The flexahopper's barrel are manufactured specifically for this purpose; others are reused from the food and beverage industry.



### Distribution

The City of Richmond's recycling depot located on Lynas Lane is used for distribution of blue boxes and garden composters. The addition of rain barrels has proven to be a good fit and has minimal impact on existing staff resources.

Last year due to limited rain barrel availability, one rain barrel was allowed per customer. With the recommended additional level of this years program customers may purchase as many as they require.

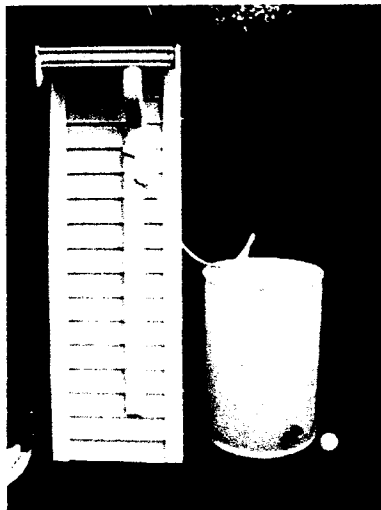


The City of Richmond, Vancouver and Delta use the specifically designed and manufactured “Flexahopper” rain barrels for use by residents for garden irrigation.

- half barrel design allows it to fit flush against side of house
- two faucets to accommodate hose and watering can
- dark forest green
- weighs 20.5 kgs (45 lbs)
- holds 341 litres (75 imp. gallons)
- overflow to storm drain
- childproof opening

Flexahopper	
Cost	\$160
Sold	\$80

Due to increased volume buying, these same units can be sold by Richmond this year for \$10 less per unit than last year.



The Garden Water Saver (**local supplier**)

- rain gutter diverter (additional \$15) which diverts the water from the rain gutter down pipe into the barrel.
- No openings for mosquitoes to enter
- holds 202 litres ( 50 gal.)
- white or blue
- self flushes when container is full
- deactivate the system during Winter in seconds
- less than half the price of any non - subsidized Rain barrel
- No openings for mosquitoes to enter.
- local business

Water Saver	
Cost	\$40
Sold	\$20

Water Quality

Rain collected in a barrel can provide a relatively clean, safe, and reliable source of water as long as the collection system is properly built and maintained. Rain that is to be used outside to water lawns or gardens is typically not a water quality concern.

Rain **should not** be used for drinking purposes unless health professionals perform a proper analysis and a treatment process is determined. In an emergency where the water distribution system is inoperable, relatively clean water is available for non-drinking purposes.

**Financial Impact**

That funding of \$44,750 be approved to purchase up to 250 of the Garden Water Saver reused barrels and 150 of the Flexahopper rain barrels. For this years' rain barrel program staff recommend the source of funding to be from the 2005 residential water metering program. We will reduce this program funding \$44,750. Future rain barrel programs will be included in the Water Utility operating budget as an additional level of service.

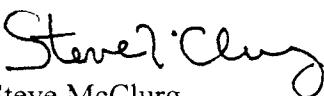
Staff recommends the City offer a 50% subsidized low cost rain barrel program utilizing existing staff and distribution facilities. An additional one-time cost of \$5000 is required to increase the exiting secured storage area located in the recycling depot to accommodate the greater number of rain barrels.

Description	Number of Units	Actual Cost Per Unit	Total Unsubsidized Costs	Subsidized Unit Price	Revenue from Sales	Net City Costs
Garden Water Saver Barrels	250	\$40	\$10,000	\$20	\$5,000	\$5,000
Rain Gutter Water Diverter	250	\$15	\$3,750		\$3,750	\$0
Flexahopper Barrels	150	\$160	\$24,000	\$80	\$12,000	\$12,000
Advertising and Misc.			\$2,000			\$2,000
Secured Storage			\$5,000			\$5,000
<b>Total</b>			<b>\$44,750</b>		<b>\$20,750</b>	<b>\$24,000</b>

**Conclusion**

Rain barrels provide a source of water for lawns and gardens that does not tax the municipal water system. The combination of residential water metering and rain barrel programs promotes and increases the public's awareness to conserve drinking water.

Implementing an annual subsidized rain barrel program in the City of Richmond will reaffirm our conservation leadership and our commitment to environmental stewardship.

  
 Steve McClurg  
 Manager, Water Services  
 (1209)