

CITY OF BURNABY

G

ENVIRONMENT COMMITTEE

HIS WORSHIP, THE MAYOR
AND COUNCILLORS

RE: RAIN BARREL PROGRAM - RAINWATER REUSE

RECOMMENDATION:

1. **THAT** Council receive this report for information.

R E P O R T

The Environment Committee, at its Open meeting held on 2003 October 14, received and adopted the *attached* report regarding the use of rain barrel programs as a water conservation initiative. The Committee advised that several rain barrel programs in the Lower Mainland area have been developed over the years and are receiving public support. The usage of rain barrels to capture rainwater for garden irrigation purposes fits well with the water conservation objective. The Committee further advised that next year Burnaby will initiate a rain barrel program under the broader Waste Reduction Program. A companion public education and advertisement plan will be developed in early 2004 to introduce the rain barrel program.

Respectfully submitted,

Councillor D. Johnston
Chair

Councillor P. Calendino
Vice Chair

Councillor C. Redman
Member

COPY - CITY MANAGER
- DIRECTOR PLANNING & BUILDING
- DIRECTOR FINANCE
- DIRECTOR ENGINEERING

TO: ENVIRONMENT COMMITTEE **DATE:** 2003 OCTOBER 03
FROM: DIRECTOR ENGINEERING **FILE:** 39500-04
SUBJECT: RAIN BARREL PROGRAM - RAINWATER REUSE
PURPOSE: To provide the Committee with information on rain barrels and to inform the Committee of the City's plan on a rain barrel program as a part of the water conservation initiative.

RECOMMENDATION:

1. **THAT** the Committee receive this report for information.

REPORT

1.0 INTRODUCTION

At the 2003 September 09 Environment Committee meeting, a question was raised by the Committee on the rain barrel program adopted by a number of municipalities in the Lower Mainland and in neighbouring jurisdictions. Arising from the discussion, staff were requested to prepare a report to provide information on the rain barrel program used by Lower Mainland municipalities, Portland and Seattle.

2.0 BACKGROUND ON RAINWATER REUSE

Rainwater capturing on individual properties provides a renewable onsite source of water that can be used for landscape or garden irrigation. Rainwater reuse has traditionally been practised in arid climates where potable water supply is scarce. In those situations, rainwater reuse is sometimes extended to supplement other water uses such as toilet flushing and washing.

In the Greater Vancouver region, watering plants and lawns accounts for approximately 40% of total residential water use in the summer months. Summer water use is one of the most important water supply issues in the Lower Mainland region. The unseasonably dry summer of 2003 has demonstrated that a greater water conservation effort must be initiated to reduce unnecessary water use. Given that reuse of onsite rainwater has the potential to reduce peak

water demand on the drinking water supply and to improve stormwater runoff, the use of rain barrels for onsite rainwater capture is gaining attention and acceptance by the general public. Even in areas with high annual precipitation including Vancouver and Washington/Oregon States, the use of rain barrels on private properties is gradually becoming popular among residents.

Rain barrels are special designed barrels that fit against an exterior wall. They are approximately 100 cm (40 inches) high and 50 cm (20 inches) wide and hold up to 350 l (75 gallons) each. The barrels have an overflow that allows excessive water to be discharged to the storm sewer connection or dispersed to the surrounding ground.

3.0 RAIN BARREL PROGRAM - CANADIAN AND U.S. CITIES

Rain barrels are available in a number of cities in the Greater Vancouver area including Vancouver, Surrey and Langley. The City of Vancouver program was started in 1995 and has the longest history of distributing the barrels to the residents. The cost of the rain barrels is about \$120.00 and the City provides a 50% cost subsidy to its homeowners. From 1995 to February 2003, the City sold approximately 1,500 units, just under 200 units per year. A water conservation study prepared by the GVRD in 2002 concluded that the economic return of the rain barrel program is extremely low, but the program has created greater awareness and interest in water conservation which will tend to increase public participation in other water conservation initiatives. In addition to the water conservation benefit, the use of rain barrels will also reduce peak stormwater runoff and improves stormwater source control.

A review of the rainwater reuse initiative revealed that other Canadian cities such as Toronto, Thunder Bay and Waterloo have also made rain barrels available to their residents and the programs are found to be popular among homeowners. The City of Portland, Oregon, offers a supplementary water supply program where a cistern may be constructed onsite by homeowners to provide a supplementary supply for toilet flushing and general garden irrigation. The systems requires a more elaborate set up than rain barrels and includes a system of pumping and treatment process. The City of Seattle, Washington, also sponsors an annual rain barrel sale event and the 2003 event was a sell out.

4.0 RAIN BARREL PROGRAM - BURNABY

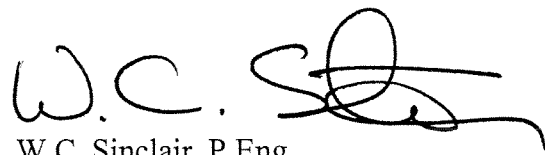
Water conservation including rainwater reuse will be considered in the drinking water demand management strategies currently being developed under the GVRD's Drinking Water Management Plan. Public education and participation is integral to a successful community based program. To manage stormwater runoff better and to use water wisely, a rain barrel program will heighten public awareness and serves as one of the building blocks for a comprehensive water conservation program in the future.

With the 2003 water shortage experience and the need to meet future water demands, Burnaby will include a rain barrel program as part of the City's Waste Reduction Program commencing in 2004. The rain barrel product will be distributed out of the Recycling Depot and sold in concert with the composter distribution program. Final details of the program will be developed in the coming months and incorporated into the 2004 budget. Appropriate promotion and education materials will be prepared to support the new program.

5.0 SUMMARY

Reuse of rainwater is not a novel idea to reduce peak demand on the drinking water supply system and to improve stormwater source control. The use of rain barrels to capture rainwater from residential buildings is an example where rainwater can be captured and reused in a relatively inexpensive manner.

Several rain barrel programs in the Lower Mainland area have been developed over the years and are receiving favourable public support. The use of rain barrels to capture rainwater for garden irrigation purposes fits well with the water conservation objective. In 2004, Burnaby will initiate a rain barrel program under the broader Waste Reduction Program. A companion public education and advertisement plan will be developed in early 2004 to introduce the rain barrel program in concert with the long established composter distribution program.



W.C. Sinclair, P.Eng.
DIRECTOR ENGINEERING

LSC:dh

cc: City Manager
Director Planning and Building
Director Finance