

COUNCIL AGENDA/INFORMATION

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Dept. Manager	Director	Municipal Manager
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The District of North Vancouver REPORT TO COUNCIL

June 18, 2001
File: 5600-90/01
Tracking Number: RCA -

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SUBJECT: Water Conservation - Rain Barrels

RECOMMENDATION:

THAT the District of North Vancouver not participate with the City of North Vancouver in a Rain Barrel Pilot Project, but continue practising and investigating other more cost-effective methods of water conservation.

REASON FOR REPORT

On Monday, June 4, 2001, Council of the City of North Vancouver unanimously approved a Rain Barrel Pilot Project, which will involve a subsidy of approximately \$60 per barrel being provided to City residents interested in purchasing a rain barrel. This report is intended to provide information so that Council may give direction for offering a similar subsidized project to District residents.

SUMMARY:

- Several municipalities offer rain barrels for sale to their residents at a subsidized cost for the purpose of promoting water conservation.
- The District previously conducted a Rain Barrel Pilot Program from 1996 to 1998, involving community volunteers to monitor the performance of three different types of rain barrels.
- Results from the previous District program indicated that, although promotion of rain barrel use appears to raise awareness of water conservation, when the expense and effort on the part of the District and the barrel user are considered there are several more cost-effective ways to reduce water consumption and promote water conservation.
- Current water conservation initiatives include:
 - conducting annual water audits and leak-detection programs
 - advertising summer sprinkling restrictions
 - having Utilities staff distribute friendly reminders of sprinkling hours to residents
 - having Bylaw staff deal with sprinkling infractions on a progressive basis
 - presenting water conservation education programs to North Shore elementary schools
 - participating in the Municipal Water Conservation Co-ordinators Group

- applying for Federal-Provincial grants for installation of automated sprinkler systems for parks and playing fields
- In the near future the City of North Vancouver, in conjunction with the North Shore Recycling Program, will be advertising the sale of rain barrels to City residents at a subsidized cost of \$100 each. The amount of subsidy per barrel is \$60.

BACKGROUND:

Several GVRD member municipalities, including the City of Vancouver, the Corporation of Delta, the City of Surrey, the Township of Langley, and the City of North Vancouver, offer rain barrels for sale to their residents at a subsidized cost. The intent of these rain barrel programs is to promote water conservation. Water conservation is recognized as a necessary and beneficial tool for minimizing water supply, treatment and distribution costs.

Previous District of North Vancouver Rain Barrel Pilot Program – 1996 to 1998

In 1996, the Utilities Department initiated a District Rain Barrel Pilot Program in order to compile data on rain barrel use and effectiveness. The program continued for three years and was concluded after the summer of 1998. A total of 12 barrels were distributed to community volunteers over the three year duration. Eight of the barrels were an early version of the “Rain Pail” barrel used by the City of Vancouver (pictured below), two were another commercially available style, and two of the barrels were reconditioned food barrels. The supply and type of barrel were varied to try to find an optimal shape/colour that would best suit the barrel user at a reduced cost.

The District of North Vancouver funded the full cost of the barrels, however the barrel user supplied the necessary fixtures to pipe the rainwater from the roof leader downspout to the barrel, and completed the installation. Costs for the fixtures were approximately \$20 per barrel. The barrel volumes ranged from 205 Litres (L) or about 45 Gallons (Gal) to 340 L (75 Gal) and the rainwater collected from the roof and stored in the barrel could be used for watering gardens or sections of lawn utilizing hoses or watering cans. Information tables were sent to the user to allow the barrel use to be tracked during summer periods, when water conservation is especially important.

EXISTING POLICY: Not applicable



ANALYSIS:

District Rain Barrel Pilot Program Results

The findings from our Rain Barrel Pilot Program were:

- barrels were generally not difficult to install
- better watering pressure can be provided if barrels can be elevated
- warm, non-chlorinated rainwater from the barrels had a noticeable positive impact on flowers and plants
- barrels provide insufficient amounts of irrigation water during hot summer periods when water is most needed
- the average amount of water used from barrels in summer was 760 L (167 Gal), with utilization ranging from 140 L to 2042 L.
- manufactured rain barrels are not cost effective for water conservation; at the present cost of water purchase from the GVWD, it would take between approximately 500 and 1000 years for the barrels to pay for themselves (not including amortization costs). For reconditioned food barrels, the payback period would be roughly 140 years

Although promotion of rain barrel use appears to raise awareness of water conservation, it was concluded that, considering the expense and effort on the part of the District and the barrel user, there are several more cost-effective ways to reduce water consumption and promote water conservation.

Current Water Conservation Initiatives

Some of the steps that have been taken by the District to practice and promote water conservation are:

- Conducting annual water audits within selected areas of the water distribution system. This program reveals unaccounted-for water use and detects subsurface leaks
- Advertising summer sprinkling restrictions several times per year in local newspapers.
- Having Utilities on-call service trucks distribute friendly reminders to residents observed to be sprinkling outside of the allowed times
- Having Bylaws staff enforce the restricted sprinkling hours on a progressive basis, beginning with educational materials and a warning being left with residents
- Organizing and co-ordinating a water conservation education program for North Shore elementary schools, which included a play and the distribution of a water conservation colouring book

In addition, the Parks Department has applied for funding under the Canada-British Columbia Infrastructure Program to install water-efficient automated sprinkler systems for selected parks and playing fields.

Enquiries from District residents into the use of rain barrels have been limited since 1998. Typically, the Engineering Services Department and North Shore Recycling will each receive four or five enquiries per year.

City of North Vancouver Rain Barrel Pilot Project

The City of North Vancouver Pilot Project will involve the sale of "Rain Pail" rain barrels to residents of the City on a one per household basis at a subsidized price of \$100 each (including taxes). As the cost to the City for each rain barrel is approximately \$160, the City will provide a \$60 subsidy per "Rain Pail" to encourage participation in the pilot program (the current retail cost is approximately \$200). The City does not anticipate that the demand for rain barrels will be high.

The pilot program will be administered in conjunction with the North Shore Recycling Program, which will assist in advertising the availability of the rain barrels, and arranging for the sale of the rain barrels through the City Operations Division. Each purchaser will be asked to complete a questionnaire to determine the success of the pilot project and staff will report back to City Council with the findings.

Due to the fact that the City has now purchased a small supply of Rain Pails and will soon be advertising them for sale to City residents at a subsidized cost, it is anticipated that some District residents will request that a similar service be provided. The District of West Vancouver will not be participating in the pilot project at this time.

Timing/Approval Process:

The City will be advertising the project in the near future, as the annual period of watering restrictions has now begun.

Concurrence: Not applicable.

Financial Impacts: Should Council wish to participate with the City of North Vancouver in the subsidized sale of rain barrels, it is anticipated that the costs to the District would not exceed \$3000. Funding is available from the Water Audit account, however this will result in a decrease in the amount of audit and leak detection work that can be completed.

Liability/Risk: Not applicable.

Business Plan:

- ♦ **Social Policy Implications:** Water conservation contributes to the concept of "liveability" by reducing the impacts of growth on infrastructure upgrading and related neighbourhood disruptions.

- ♦ **Environmental Impact:** Water conservation can delay or prevent the development of new water supply sources, which in some cases would require tree clearing and loss of fish and wildlife habitat.
- ♦ **Public Input:** Members of the public have been given an opportunity to participate in and provide feedback for the District Rain Barrel Pilot Program.
- ♦ **Other Business Plan areas:** Not applicable.

Options:

1. Council can support the recommendation, or
2. Council can direct staff to participate with the City of North Vancouver in the sale of subsidized rain barrels to District residents on a one per household basis for \$100 each, or
3. Council can consider a different level of subsidy.

R.O. Huffman, P.Eng.
Manager, Utilities

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