

November 27, 1997

SUBJECT: PARK BOARD - REENGINEERING OF LITTER/WASTE CONTROL  
PROCESS

### **RECOMMENDATIONS**

- A. ***THAT the Park Board approve recommendations 1 - 5 for the new process for controlling litter and waste in parks.***
- B. ***THAT funds to cover the capital costs be borrowed from the 1997 - 1999 Capital Plan accounts and be repaid by annual cost savings in the operating programs over the next three years.***
- C. ***THAT implementation of this new process begin in November 1997 and be completed before the end of May 1998.***

### BACKGROUND

During the Spring of 1996 the Environment & Operations Division conducted a study that outlined the major operating processes within the Division and ranked them for opportunity for improvement. The first of those processes, "Controlling Litter and Waste," was examined by a working team of nine staff over a four month period ending February 28, 1997. The team defined the process as follows. "The controlling litter and waste process extends from when a piece of litter or waste is placed either on the ground or in a Park Board receptacle to when it arrives at the landfill, transfer station or recycling location. The process covers waste left in the parks by park users and waste generated internally by Park Board staff activities."

The working team began its study by first outlining and understanding the process as it exists today in terms of waste stream contents, resources used (staff, equipment etc.), service levels and performance levels. They also surveyed several other municipal park operations as to their methods of operation. Following this information gathering stage the working team developed several options for improving the service, efficiency and cost effectiveness of the Controlling Litter & Waste process at the Vancouver Park Board. After further discussion of these options with the project steering committee, a new vision emerged for this process and several recommendations made.

### DISCUSSION

#### Park Waste Collection

#### Current Situation

Park garbage cans in all general neighbourhood parks are largely 45 gallon

drums. These are currently picked up by two staff using a one ton side loading garbage truck (Haul All). Residential garbage accounts for approximately one third of the waste removed from these neighbourhood parks. Garbage cans in the major park areas, Stanley Park and Queen Elizabeth Park, are serviced by a 16-yard rear loading garbage truck (packer) with two staff as part of its three-yard commercial bin pickup route. Small pickup trucks (Litter Carts with one staff) are also used for servicing some cans in Stanley Park. The Downtown Horticultural crew serviced the cans in Downtown parks until June 1997 when Sanitation Services took over emptying these cans.

Staff experimented with a variety of can specifications in various neighbourhood parks during the spring/summer of 1997. This allowed them to identify a specific size and style that will enable one person pickup and that may help reduce the amount of residential garbage being dumped in parks, while providing the appropriate level of attractiveness.

Tests included the following:

20 gallon, exposed aggregate concrete containers used by the City Engineering Department on commercial streets. These proved to be too small for a weekly collection schedule resulting in increased litter. The Engineering Department empties theirs about 3 times per week.

35 gallon concrete container was tested. Although this accommodated the weekly volume, the insert proved to be too heavy for the swamper to lift straight up out of the casing and carry to the truck.

Another test involved installing rain proof lids on existing 45 gallon drums and using one worker to remove a plastic bag liner. The lids were frequently removed by scavengers looking for returnable cans, etc. leaving the bag open to fill with rain. The bags proved to be too heavy and awkward for one worker to lift repeatedly over an 8 hour shift. This system did not address the unattractiveness of the steel barrels.

The most successful test was with the wheeled plastic "Tote" containers. Tote cans are available in three sizes, an advantage for varying site needs. They have an attached rain proof lid that is not removable and can only be partially opened allowing it to fall closed when released. These require no manual lifting as they can be unlocked, wheeled to the truck and dumped by an automatic lifter mechanism on the truck. These are also used by the City Engineering Department so they have trucks with emptying devices that could be borrowed if our truck is out of service for maintenance.

### Recommendation

Replace all year round 45 gallon garbage barrels in neighbourhood parks beginning in March of 1998 with the selected style "Tote" cans. Begin one person pickup in neighbourhood parks (on the Haul-All vehicle) at this time. Approximately 800 new cans will be required at a cost of about \$100 each plus purchase and installation of anti theft locking devices. (Note that Tote can installation and one person pickup cannot begin until the new replacement truck with an appropriate mechanical lift is delivered.)

To accommodate larger volumes of waste during the spring, summer and early fall, neighbourhood parks will need to be supplemented with additional Tote cans as required. The Haul All vehicle working in neighbourhood parks will operate with one staff worker seven shifts per week during this time.

Eliminate four weekly shifts of the Ranger vehicle operating in Stanley Park during 19 weeks in the fall and winter (from 14 to 10 weekly shifts.) Also, continue to use Park Board Sanitation staff rather than Horticultural staff to service Downtown park garbage cans.

There will be additional maintenance costs for these cans including regular cleaning with a pressure washer during the summer and replacements due to vandalism.

Annual Cost Savings: \$ 76,600

### Commercial Bins (Major Parks and Community Centres)

#### Current Situation

The Park Board 16 yard packer truck currently services 40 Park Board and commercial customer three yard bins in Stanley Park, Queen Elizabeth Park and at some Community Centres. The Park Board pays City Sanitation to service an additional 49 commercial bins at Community Centres, Marinas and other locations with their 30-yard load-all packer vehicles.

We considered using City Engineering or an outside contractor to service all of the three yard bins in Stanley Park, Queen Elizabeth Park, and at Community Centres. However, it was determined that gaining access to many bins in Stanley Park by the large 30 yard packer vehicles used by the City and contractors would be very difficult and at the very least substantial changes to roadways and pathways would be required. Moreover, these larger vehicles would cause significant damage to existing parking lots, roadways and pathways.

#### Recommendation

As a medium sized garbage packer vehicle (16 yard) is required to get to the three yard bins in Stanley Park while minimizing damage to park infrastructure, we recommend that the existing Park Board packer vehicle that is due for replacement be replaced with a similar vehicle. The cost of having this vehicle service bins outside Stanley Park is competitive with what the City currently charges the Park Board for that service. As such, we will change the use of this vehicle to service all bins currently serviced by the Park Board plus about 20 of the 49 commercial bins currently done by City Sanitation.

Annual Cost Savings: \$ 18,000 (maximum)

### Recycling

#### Current Situation

The Park Board has been interested in initiating a recycling program in parks for several years. Moreover, the waste characterization study conducted by Stearns & Conrad engineers, as part of this project, identified the existence of recyclables in recoverable quantities in some parks. In response to this, five modest recycling stations of three drums each were set up in Stanley Park at a cost of \$1,000/site (one for beverage containers, one for plastic/glass and one for garbage). Additional funding will be required if we expand this program to other parks.

The Provincial Government has announced the expansion of the bottle deposit program to include all beverage containers. However, expanding the recycling program should not be based on recovering the deposit value of beverage containers but diversion of refuse from the landfill. Scavengers remove all recyclable beverage containers from recycling stations which accomplishes the goal of recycling but leaves no revenue for the Park Board.

### Recommendation

Expand the recycling program to provide stations at all major picnic areas and at neighbourhood parks where volume warrants. The picnic sites would be 10 additional sites. Carry out a test program at 10 neighbourhood parks with a view to expanding the program to about 35 additional sites if successful.

Annual cost to pick up recyclables biweekly for 6 month season and maintenance of stations, based on the 25 sites: \$6,500.

### Wood Chip Disposal

#### Current Situation

Wood chips generated by the Arboriculture operations are currently collected into 40 yard bins at Evans Yard and Sunset Nursery. These bins are transported to Mitchell Island for disposal at a cost of \$270 per load plus trucking.

The City had proposed using 185 annual loads of this material as road base at Burns Bog for a savings of \$50,000. It was later determined that this material is not suitable for the purpose. Arboriculture will continue to search out a less costly alternative for chip disposal.

### Education

#### Current Situation

A significant amount of refuse currently found in neighbourhood park garbage cans is residential garbage (approximately 30%). To reduce this illegal dumping of garbage several education initiatives have been identified.

#### Recommendation

The problem should be clearly communicated as part of the annual City campaign - "Keep Vancouver Spectacular." Articles could also be written for

publication in local newspaper and newsletters. Finally, new signs quoting the bylaw that forbids the disposal of residential garbage in parks need to be installed on or near neighbourhood park garbage cans. These communication initiatives will also be used to encourage recycling in park areas.

### Staffing Implications

#### Current Situation

There are currently seven full time staff positions associated with the collection and disposal of park garbage from cans and three yard bins. Five staff are added to this operation during the spring/summer/early fall period to handle the additional volume of garbage.

#### 5. Recommendation

Moving to one person on the Haul-All vehicle that services neighbourhood parks and reducing the Litter Cart shifts in Stanley Park will enable the Sanitation group to operate with five staff as opposed to seven during the winter period. Similar staffing to that which exists today will be required during the summer. As such, two regular full-time positions should be eliminated from the operation when the new cans are in place at neighbourhood parks.

The project Working Team identified the following areas where these freed up staff could be used provided funds are retained to cover the cost.

- Provide regular washing of all picnic shelters, monuments, picnic tables and park benches.
- Add additional paper picking, particularly in high profile areas such as Thornton Park and Downtown Parks.
- Increase recycling in parks.

#### Summary of Annual Costs and Savings

	<u>Savings</u>	<u>Expenses</u>
Park Garbage Collection Savings		
a. Reduce Haul-All staff by 1 RFT	\$ 53,200	
b. Add time to pressure wash Tote cans (enclosed cans became unacceptably odourous during test)		\$ 5,550
c. Add 1 extra shift per week Apr. 1 to Sept. 30 due to increased time required for 1 person doing route		\$ 5,550
d. Reduce from 14 to 10 the shifts per week on the litter carts Nov. 1 to Mar. 1	\$ 18,500	
Eliminate one casual position Downtown Parks maintenance crew and mtce. costs	\$ 26,000	

Less annual cost of maintenance and replacement of new Tote cans		\$ 8,000
Annual cost of maintenance and replacement costs downtown cans		\$ 2,000
Sub total	\$ 97,700	\$ 21,100
Net saving	\$ 76,600	
3 Yard Commercial Bin Pickup	\$ 18,000	
Annual cost to empty containers at recycling stations		\$ 5,500
Annual maintenance cost for recycling stations		\$ 1,000
Annual costs for		
a) signage		\$ 800
b) education material (brochures, newsletters, etc.		Nil*
SUBTOTAL	\$ 115,700	\$ 28,400
NET SAVING	\$ 87,300	

\*to be included in City newsletters, and other publications.

#### Capital Costs

- 800 new Tote cans
- \$ 80,000

Locking devices and installation for about  
250 cans @\$350 each \$ 87,500

(Balance can be chained to existing posts)

20 new 3 yard bins @ \$1500 \$ 30,000

(to replace bins currently contracted to

City Sanitation. Park Board bins are a

different design because of difference in

truck)

20 new recycling stations \$ 20,000

A fund to supplement Plant Account funds for

early replacement of second Haul-All unit

with unit equipped to lift and empty Tote

cans \$ 35,000

TOTAL (Payback 2.9 years) \$ 235,500

### Implementation

#### Garbage Trucks

Order replacement Park Board 16 yard packer vehicle which is due for replacement and fully funded by the Plant Account. Order replacement units for the Haul-All trucks immediately upon approval of this report. One is due for replacement and is fully funded by the Plant Account. The second unit will be early replacement and is partially funded by the Plant Account.

#### Park Garbage Cans

Install new cans beginning in March 1998 or upon arrival of new trucks. Begin one person pickup operation then.

#### 3 Yard Commercial Containers

Replace 20 City serviced bins with Park Board style bins and take over servicing in 1998.

#### Park Recycling

5 recycling stations (3 barrels each) were installed in Stanley Park (Train Picnic Shelter, Lumberman's Arch, Trailer Concession, Second Beach, English Bay). The program proved successful but scavengers cut the lids on the containers for cans and bottles with a deposit value and took the contents. This is consistent with previous attempts to collect recyclables. Scavengers damage the container to remove the contents. However, we know these scavengers sell the cans and bottles so they are recycled. To expand this program will require a capital cost of \$1,000 per site and funding to provide for pick up of contents and maintenance.

Prepared by:  
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KLS/ss