

REPORT  
REGULAR COUNCIL MEETING  
1990 JUNE 11

---

THE CORPORATION OF THE DISTRICT OF BURNABY  
ENVIRONMENT AND WASTE MANAGEMENT COMMITTEE

HIS WORSHIP, THE MAYOR  
AND ALDERMEN:

SUBJECT: ASSESSMENT OF IMPACTS OF NON-USE OF PESTICIDES  
IN PUBLIC AREAS EXCLUDING GOLF COURSES AND  
GREENHOUSES

---

RECOMMENDATION:

1. THAT staff prepare a strategy for implementing mitigated measures associated with the Integrated Pest Management Program and such a strategy should include reference to priorities, costs and it should assume a minimum use of pesticides.

REPORT

The Environment and Waste Management Committee, at its meeting held 1990 May 08 received and adopted the attached staff report outlining action taken by the Integrated Pest Management Committee.

In compliance with the Committee's direction, this report is submitted to Council for endorsement.

Respectfully submitted,

INTERNAL DISTRIBUTION:  
AGENDA 1990 JUNE 11  
COPY - MUNICIPAL MANAGER  
- DIR. ADMIN. & COMM. SERV.  
- DIR. PL. & BLDG. INSP.  
- DIR. RECREATION & CULTURAL SERV.  
- CHIEF PUBLIC HEALTH INSP.

Alderman J.M. Sawicki  
Chair

Alderman D.P. Drummond  
Member

Alderman F.G. Randall  
Member

Alderman E. Nikolai  
Member

Alderman J. Young  
Member

REPORT  
Regular Council Meeting  
1990 June 11

THE CORPORATION OF THE DISTRICT OF BURNABY  
ENVIRONMENT AND WASTE MANAGEMENT COMMITTEE

REPORT OF THE ENVIRONMENT AND  
WASTE MANAGEMENT COMMITTEE

RE: ASSESSMENT OF IMPACTS OF NON-USE OF PESTICIDES IN  
PUBLIC AREAS EXCLUDING GOLF COURSES AND GREENHOUSES

RECOMMENDATIONS:

1. THAT staff prepare a strategy for implementing mitigated measures associated with the Integrated Pest Management program and such a strategy should include reference to priorities, costs and it should assume a minimum use of pesticides.

R E P O R T

1.0 BACKGROUND:

During the regular Council Meeting on 1989 May 23, the Municipal Manager submitted a report from the Director Recreation and Cultural Services in response to Council's request for the development of an Integrated Pest Management Program.

Council received the report and adopted the recommendations of the Municipal Manager which, in part, stated that the current non-use of chemicals, as directed by Council, continue for pre and post emergent weed control in general public areas excluding golf courses and greenhouses, and that a committee of Parks, Engineering and Environmental Health staff review the effectiveness of the non-use of chemicals for pre and post emergent weeds and submit a report to the Environment and Waste Management Committee of Council for consideration.

The Environment and Waste Management Committee, at its meeting held on 1990 April 10, received a report from the Integrated Pest Management Committee. This report provided information on action taken by the Integrated Pest Management Committee to date, in assessing the effects of non-use of pesticides in public areas excluding golf courses and greenhouses, and discussed the mitigative measures being developed and implemented by Engineering and Parks & Recreation Departments. This report, however, did not evaluate the results or stipulate the costs of developing and or implementing these mitigative measures.

ASSESSMENT OF IMPACTS OF NON-USE OF PESTICIDES  
IN PUBLIC AREAS EXCLUDING GOLF COURSES  
AND GREENHOUSES

1990 JUNE 11 .....2

2.0 INTRODUCTION:

The Integrated Pest Management Committee, upon formulation, attended a two-day seminar sponsored by Parks & Recreation Department on Integrated Pest Management. The seminar, presented by Mr. Tim Rhey a noted expert in Municipal I.P.M. programs of Eugene, Oregon, provided an understanding of the key elements in pest management, and set the stage for mechanisms to evaluate the effects of non-use of pesticides. Many of the mitigative measures noted in this report were presented in the seminar, and have shown to be successfully implemented in various cities for controlling weeds and other pests.

3.0 METHODS OF ASSESSMENTS:

As a means of assessing the effect of non-use of pesticides, the Committee visited various sites maintained by Engineering and Parks Departments. Upon visiting each site, comparisons of "before" and "after" the ban were made. The aesthetics of the sites and the complaints from the public were also noted. Maintenance staff were also interviewed to determine the number of hours they spent at each site and the amount of chemicals that would normally be used to treat the site.

Furthermore, each site was compared to alternative mitigative measures formulated including where applicable, control of weeds, insects, disease, as well as monitoring, maintenance, designing and construction.

The Committee, however, did not survey the tolerance levels of the public on the current conditions, but rather adopted the maintenance standards of Parks and Engineering Departments prior to the prohibition on use of pesticides in 1988, as a level of tolerance.

4.0 EFFECTS OF NON-USE OF PESTICIDES:

The major effect of non-use of pesticides related to a comparative increase in amount of weed growth in shrub beds, flower beds, landscaped areas, along boulevards, trees and fence lines.

It was noted that maintenance priorities for boulevards, horticulture and grounds were redirected so that high profile areas received increased manual and/or mechanical weed control, to the detriment of other areas. Horticultural staff report that boulevard beds suffered most from the non-use of chemicals because of initial installation of poor quality soils, containing weeds and seeds in these soils.

A comparison of maintenance in 1988 and 1989 for a few horticultural and boulevard beds has been recorded as follows:

<u>Location</u>	MaInt. Hrs.		Ratio 88/89
	In 1988	In 1989	
Central Park (Tennis Courts) shrub beds	6	47	1:8
Maywood shrub bed	15	44	1:3
Dover/McMurray boulevard	2	9	1:5
Willingdon Exit boulevard	25	243	1:10
Boundary Berm boulevard	68	122	1:2

Unless other mitigative measures are used, the maintenance hours are likely to escalate even further due to diminishing effect of pesticide residues in the future.

An assessment on complaints received from the public indicated that there were forty-two complaints made during spring/summer of 1989 regarding weeds and insects. These, according to staff from Parks Department, were higher proportion than the 1988 season.

Parks and Engineering Departments have always shown a concern over the use of pesticides, and have used them selectively when compared to other Municipalities. However, the prohibition of use of pesticides has assisted in minimizing the impact to the environment. For example, Casoron was applied at an average rate of 120 kg/year to shrub beds in parks and boulevards - prohibition of its use has contributed to the environmental preservation.

#### 5.0 COSTS OF MAINTAINING PARK STANDARDS:

According to a report from Director Recreation & Cultural Services, the additional estimated costs to maintain the same landscape and street maintenance standards without the use of chemicals was approximately \$450,000. This cost was simply a projection for replacement of manual work by eliminating the use of chemicals.

It is the opinion of the Committee that these additional costs due to elimination of chemical use must reflect combination of manual labour, implementation of mitigative measures noted in this report, and variable standards for a hierarchy of areas rather than manual labour only.

The Committee, upon approval, can review and provide a report on these costs. Staff from Parks Department are already in a process of reviewing, prioritizing and implementing some of the mitigative measures.

#### 6.0 MITIGATIVE MEASURES FOR VEGETATION CONTROL:

Recognition is given to staff from Parks Department for using other techniques such as increase of bark mulch in shrub beds to help weed control, water blasting to remove aphid infestation on trees, clipping of tree branches to remove tent caterpillar nests. However, other measures noted in the Integrated Pest Management seminar, must be further explored and evaluated including:

##### 6.1 Weed Control Measures In Horticultural Division

Increasing the amount of shrub planting in existing beds and specifying thicker planting in new beds; increasing groundcover planting without mixing plant types; cementing in rocks if used as groundcover; installing concrete edge and mowing strips on flower beds where appropriate; timing construction and horticulture operations closer together so that weeds do not have a chance to get established; and, eliminating or rebuilding some of the worst areas that cannot meet the new standards.

##### 6.2 Weed Control Measures In Maintenance Division

Reducing the use of pavers where possible and considering other paving materials; installing concrete strips under fences, backstops and under bleachers; where appropriate, reducing use of limestone for trail surfacing and converting some of the existing trails; accepting lower standards of maintenance in rock barriers or eliminating rock barriers and exploring uses of steeper earth berms as traffic control devices.

##### 6.3 Creation Of Proper Growing Conditions To Reduce Problems Of Stress, Disease and Insect

Using improved soil mixes especially in the horticultural area; reducing soil compaction problems created by machine operations on site; installing water lines within easy reach of all horticultural areas including traffic islands; stopping development and eliminating the small traffic island plantings where availability of water is a problem; selecting hardy and well adapting plant varieties; thoroughly inspecting plants when delivered to ensure that they are disease free; and, installing more drainage at the time of park construction.

ASSESSMENT OF IMPACTS OF NON-USE OF PESTICIDES  
IN PUBLIC AREAS EXCLUDING GOLF COURSES  
AND GREENHOUSES

1990 JUNE 11 .....4

6.4 Modifying The Existing Design And Construction Practices

The existing design and construction practices must be modified to reflect the maintenance approaches, and as those latter methods change, the development procedures must also accommodate those changes.

6.4.1 Development Of Construction Practices/Standards To Be Implemented With Each Project Which Forms Basis Of All Cost Estimates

The standards should reflect the development from a high profile to low profile sites, be confirmed through the design process, and must be communicated to the maintenance staff. Most importantly, the standards must be maintained throughout the development. If funds are insufficient to complete the project as proposed it should be halted until funds are obtained instead of continuing with substandard development.

6.4.2 Development Of Maintenance Standards For Each Park That Will Establish Levels For Each Site

The maintenance specification would help in responding to complaints and guide the level of work effort. The level of use of the site by the public must reflect developing maintenance levels. Furthermore, the public should be informed on the Municipality's endeavours and educated about maintenance standards and therefore help in reducing public complaints.

6.5 Pesticide Use For Vegetation Control

Exploration and evaluation of additional mitigative measures noted in this report should be viewed to a common end of using a minimum amount of pesticide only when it becomes absolutely necessary.

7.0 CONCLUSION:

It is recognized that the prohibition on use of pesticides in public areas excluding golf courses and the greenhouses in the nurseries has resulted in an increase in weed growth and an increase in the maintenance time.

Previous projected costs by Director Recreation & Cultural Services which reflected the replacement for manual labour by elimination of chemical use need to be reviewed. The costs should relate to a combination of manual labour, mitigative measures, and variable standards for a hierarchy of areas in order to provide long term cost savings.

Although staff from Parks and Engineering Departments are in a process of reviewing, prioritizing and implementing some of the mitigative measures, other measures noted in the Integrated Pest Management seminar need to be explored and evaluated.

