
CITY OF KELOWNA

MEMORANDUM

Date: March 26, 2004
File No.: 6130-13
To: City Manager
From: Parks Manager
Subject: Integrated Pest Management Program
Prepared by: Ian Wilson, Urban Forestry Supervisor

RECOMMENDATION

THAT Council receive for information the March 26, 2004 report from the Parks Division on the Integrated Pest Management (IPM) Program.

BACKGROUND

This report provides an update on the status of IPM initiatives by the City of Kelowna Parks Division since the last report of March 19, 2003.

ACTIVITIES IN 2003

The Parks Division achieved another significant reduction in pesticide use in 2003, with a 15% drop (by volume; 8% by weight of active ingredient) in use levels in parks and on boulevard trees. This is in addition to a 14% drop last season. This does not include the cemetery which is dealt with separately below. Much of the reduction came from reduced usage of turf herbicides. Parks will continue to work hard to minimize pesticide usage, however we expect future use will fluctuate according to conditions and use levels. For example, sports field usage is higher than ever, in part because more than 28 school district fields were closed in 2003.

Some highlights include:

- ◆ Parks has nearly eliminated the use of insecticides currently being reviewed by the federal Pesticide Management Regulatory Agency (PMRA), including diazinon, chlorpyrifos, malathion and carbaryl. Use was negligible (10 grams of carbaryl used) in 2003. It was recently announced that some of these pesticides will soon be de-registered and Parks will be disposing of leftover stock appropriately.
- ◆ Use of herbicide products currently under review by the PMRA has also declined significantly in recent years (Fig. 1).
- ◆ IPM educational programs are continuing (e.g. in conjunction with the Mayor's Environmental Expo and Arbour Day and media releases). Parks may look at expanding this program through a budget item in 2004.
- ◆ Street tree pest problems were again very minimal in 2003. Monitoring indicated that elm leaf beetle did not require any treatment.

- ◆ A large pine beetle infestation in the Kettle Valley area was dealt with by the developer early last spring. However, due to extreme hot and dry conditions last year, pine beetle is increasing again. Small infestations have been discovered on city properties near the airport, the landfill, Dilworth, and in Knox Mountain Park. Some larger infestations have also been seen on private properties.
- ◆ Parks partnered in a research project with Olds College (Olds, AB) to participate in a research trial involving “corn gluten meal” and other natural products which have activity similar to a pre-emergence herbicide. Trials are on-going here and in other partner cities, including Penticton, Calgary and Regina for another season.
- ◆ Parks borrowed and tested a hot-water weed machine last season, which kills weeds using steam and boiling water. Results were “luke-warm”. This season, we will be testing a propane-powered unit which appears more promising.
- ◆ In cooperation with the Ministry of Agriculture, Fisheries and Food, some new biological control programs were initiated against noxious weeds, for example the introduction of a weevil against “dalmation toadflax” in the Knox Mountain and Dilworth Mountain areas. Biological control programs continue against tree and shrub pests.
- ◆ Older playgrounds with treated wood will gradually be replaced in the coming years. Manufacturers have voluntarily stopped the treatment of wood with Copper Chromated Arsenate (CCA).
- ◆ A research partnership is being explored with a local researcher and the City of Penticton, to look at the use of beneficial “mycorrhizae” to improve the health of street and park trees. Mycorrhizae are naturally occurring fungi that form a beneficial association with tree roots. They enable trees to better tolerate stress, take up nutrients and avoid harmful substances such as salts. Unfortunately they are absent in many urban soils. This research would look at inoculating newly planted trees with these fungi to improve their health.

THE OKANAGAN MOUNTAIN PARK FIRE AND IPM

After the large Salmon Arm fire of 1998, bark beetle populations built up in burned and weakened trees over approximately 3,000 ha. Forest health experts feared that beetles would build up in the scorched materials and then attack healthy trees in nearby areas once the burned wood was exhausted, therefore a large beetle control program was put in place.

There is a similar risk to unburned trees in the Mission neighbourhoods, therefore the Parks Division has been in contact with the Ministry of Forests to develop a plan to address urban forest health issues after last summer's fires. It would likely take 1-2 years before any problems surfaced, therefore monitoring will be required in the mean time.

CEMETERY

Weed control at the cemetery has proven to be a major challenge in the large dry heritage sections. The bare ground in these areas is continually infested with weeds and becomes a muddy, slippery mess when wet. These areas have been sprayed for the last few seasons by a separate contractor under a different pest management plan. This is a major design problem that has been an issue ever since the cemetery started 100 years ago.

The best long-term solution would be to reconstruct these rows and pathways using a surface treatment that is more weed-resistant, such as crusher chips. Parks feels that it is not reasonable to expect the cemetery to deal with this type of issue under it's current business plan, as it has been a very long-term problem. Therefore Parks is proposing to submit a capital budget item for 2005 to initiate a program of gradual improvements.

In the short term the money that has been dedicated to spraying will instead be shifted to hiring a contractor or summer student for manual control treatments. We are also planning to experiment with some weed barriers this season.

CHANGES TO PEST MANAGEMENT LEGISLATION

There are a number of recent changes in federal and provincial pest control legislation. The new Federal Pest Control Products Act will tighten safeguards around pesticide use. A number of older pesticides are being voluntarily de-registered and some products are being replaced with lower risk substitutes.

The Provincial Pesticide Control Act was recently replaced with the IPM Act, expected to be in force by summer 2004. This new legislation is more "results based", with standards and fewer government approvals required for pesticide application. However, penalties and requirements for record-keeping will be much more stringent. Based upon a recent informal audit which is not yet completed, it appears that the Parks Division is doing well, however some adjustments will be made if necessary to ensure compliance with the new legislation.

CONCLUSIONS

The IPM program in Parks continues to be an extremely effective tool for environmentally friendly pest management. Parks will continue to keep Council updated on progress in this rapidly changing area.

Joe Creron, Parks Manager

c.c. Director of Parks and Leisure Services
 Urban Forestry Supervisor
 Parks Maintenance Supervisor
 Cemetery Manager

Enclosure.

Figure 1. Use of four herbicides (under PMRA review) since 1998, by weight of active ingredient. Note: use of MCPA is zero across the board.

