

EXECUTIVE ORDER: No. 60

EFFECTIVE DATE: December 20, 1995

SUBJECT: Establishing an Integrated Pest Management Policy for Metro Facilities

Integrated pest management is a pest management strategy that focuses on long-term prevention or suppression of pest problems by using a variety of control tactics. Examples of tactics include plant selection, appropriate plant maintenance practices, mechanical and biological controls, and least-toxic chemical controls that have minimum impact on human health, the environment, and non-target organisms (Flint, et al., 1990).

Metro manages many public facilities that include buildings, landscaped areas and natural areas, and is obligated to maintain them so they continue to be attractive and safe places for the public to visit. Maintenance practices at Metro facilities include the use of pesticides to control insect, disease, weed, and vertebrate pests.

Goal 13 of the *Regional Solid Waste Management Plan* directs Metro to develop specific methods to minimize the amount of hazardous wastes entering the mixed waste stream and solid waste facilities. Hazardous wastes include, but are not limited to, some cleaners, solvents, pesticides, automotive paint and other products (ORS 459).

While in the short run pesticides are usually effective at accomplishing their stated purpose, in a longer view their costs in economic, environmental, and sociological terms can exceed their benefits. Due to overuse, more than 600 pests are known to be resistant to one or more pesticides (Georghiou, 1986). Furthermore, pesticides can also have undesired effects when they move to locations where they were not intended. Current research supports the theory that pesticide use will continue to foster pest resurgence, secondary pest outbreaks, and pesticide resistance, and will continue to have the potential for harming non-target organisms.

Metro is in a position to address pesticide use in the Portland metropolitan area. Pesticide use in urban areas has been found to be as high as twice that in agriculture (von Rumker et al., 1972). A survey in the mid-1970's found that more than 90 percent of American households use pesticides on their property (U.S. EPA, 1979), and fewer than 50 percent of home owners read the label on the container (Bennet, et al., 1983).

Therefore, in order to:

1. Serve as a model for local governments and home owners in the Portland metropolitan area regarding pesticide use;
2. Lessen the environmental impact of our landscape practices by reducing our reliance on pesticides;
3. Reduce hazardous waste, as directed by the *Regional Solid Waste Management Plan*; Metro will hereby manage the pests that occur at its facilities using integrated pest management principles as outlined in Attachment A.

Ordered by the Executive Officer this 20th day of December, 1995.



Mike Burton, Executive Officer

ATTACHMENT A TO EXECUTIVE ORDER NO. 60

METRO

ALTERNATIVES TO PESTICIDES POLICY

December 1995

Integrated Pest Management: Principles

Although many definitions of integrated pest management can be found in literature, the basic tenets of integrated pest management are consistent throughout them:

1. Although pest eradication is not feasible, it is possible and desirable to modify a site so that pest occurrence is greatly reduced or eliminated from the site.
2. Pests must first be correctly identified before any measures to control them are attempted.
3. Monitoring of the pests is essential to an IPM program.
4. Thresholds mark the pest population size that causes damage.
5. Control measures are not used until thresholds are reached.
6. Control measures other than pesticides often exist for a given pest, and selection criteria for them are based on the use of the site, the threat of the pest, and the impact that the control measure will have on the long-term occurrence of the pest, as well as the environmental, economic, and sociological impacts of the control measure.
7. Records of pest control tactics are maintained and occasionally reviewed to evaluate long-term success or failure of the strategy. Modifications to the plan are made as needed to further reduce pests.

Integrated Pest Management: Implementation and Documentation

In order to implement the principles of integrated pest management outlined above, the operations manager at each Metro facility will designate an Integrated Pest Management Coordinator. The Coordinator will be responsible for the preparation and implementation of Pest Management Plans. The Pest Management Plans will include:

1. **A description of the life cycle and behavior of the pest and the damage that it causes.**
2. **The intended use of the building, landscape, or natural area.** A written statement for the site indicating its use will help identify how much time and effort will be needed to maintain it. For example, a playfield that is used occasionally by park visitors for pickup games can tolerate more weeds than a field used regularly for league soccer.
3. **A quantifiable monitoring program.** It will include a) some measure of the pest, such as actual sightings, damage that the pest causes, or visitor complaints, and b) the frequency with which monitoring will take place, such as weekly, monthly, several times a year coinciding with emergence times, or only after a sighting is made. "Quantifiable" means that the results of monitoring will be written, indicating a measure of the pest - its presence or absence, evidence of damage, number of trapped individuals, or a subjective measure of density - "heavy", "moderate", or "light" infestation, for example.
4. **The options for control, including cultural practices, physical traps and barriers, available biological control agents, and one or more least-toxic chemical controls.** The options for control will indicate the impact each control measure will have on the long term occurrence of the pest, the cost of each control measure, and the hazards that each control poses to the practitioner, to the environment, and to the general public. Chemical

control measures that are included will be listed by the common name of the active ingredient, for example "glyphosate" will be listed instead of "Roundup," "insecticidal soap" will be listed instead of "Safer's soap," etc. It is the responsibility of the user to select the correct product for the intended use. Other pesticides will often be available for control of the pests. The Oregon State University Cooperative Extension Service can provide the names of those that are labeled for use on the pest in question. Although the pest management plans will list the least-toxic chemical controls, site managers will not be bound to use only those materials indicated in the plans. The purpose of the plan is to identify the alternatives available to them and their associated costs. Ideally, there will be at least one alternative that will provide long-term control of the pest problem.

5. **The name(s) or position(s) (for example, "gardener," "site staff," "contractor") of the person(s) that will decide whether action must be taken, what tactic(s) will be used, and who will carry out the tactic(s).** The selected person will judge the need for control of a pest based on the intended use of the site, the results of monitoring, and the severity of the threat that the pest poses. The economic, ecological, and sociological costs of the pest management tactics will be given equal weight when considering which tactics to use. Wherever possible, several options will be used in concert to reduce pests. Wherever possible, long-term strategies or those that prevent reoccurrence will be used.
6. **Evaluation of the selected tactics and documentation.** Often, continued monitoring will be sufficient to evaluate the effectiveness of a control measure. Results of the initial monitoring efforts will serve as the baseline. Licensed applicators are required to maintain records of the pesticides they use, so no further documentation of them is necessary. However, the uses of alternatives to pesticides will be unique to each site and should be documented.

Integrated Pest Management: Annual Review and Reporting

1. The IPM Coordinator at each site will provide a written annual report to the Executive Officer that includes the results of monitoring, the tactics used, and the results of the tactics for each pest at the site. The report will be in the form of a memo, and submitted to the Executive Office by September 30th of each year.
2. The Pest Management Plans will be reviewed annually, and updated as needed to add or delete pests, and to reflect recent research.

References


- Bennet, G.W., E.S. Runstrom, and J.A. Weiland. 1983. Pesticide use in homes. *Bull Entomol. Soc. Am.* 29(1):31.
- Flint, M.L., S. Daar, and R. Molinar. 1990. *Establishing Integrated Pest Management Policies and Programs: a Guide for Public Agencies.* IPM Education and Publications, University of California, Davis, CA.
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- Miller, C.W., B.M. Zuckerman, and A.J. Charig. 1966. Water translocation of diazinon-C14 and parathion-S35 off a model cranberry bog and subsequent occurrence in fish and mussels. *Trans. Am. Fish. Soc.* 95:345.
- National Research Council of Canada. 1978. *Phenoxy herbicides: Their effects on environmental quality with accompanying scientific criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD),* NRCC 16079, Ottawa, Ontario, 314p.
- U.S. Environmental Protection Agency. 1979. *National Household Pesticide Usage Study, 1976-1977,* Report No. EPA/540/9-80-002, 126p.
- U.S. Environmental Protection Agency. 1993. *Guides to Pollution Prevention: Non-Agricultural Pesticide Users.* EPA/625/R-93/009, Office of Research and Development, Washington, D.C.
- Von Rumker, R., R.M. Matter, D.P. Clement, and F.K. Erickson. 1972. The use of pesticides in suburban homes and gardens and their impact on the aquatic environment. *Pesticide Study Series 2.* Environmental Protection Agency, Office of Water Programs, Appl. Technol. Div.

TO: Metro Councilors
Metro Auditor
Department Heads

FROM: Mike Burton
Executive Officer

DATE: December 19, 1995

RE: Integrated Pest Management Policy



Attached, please find Executive Order #60, regarding the Establishment of an Integrated Pest Management Policy for Metro Facilities.

Please share this Executive Order with your staff.

Attachment