CITY OF BOULDER
INTEGRATED PEST MANAGEMENT POLICY
Adopted 1993

I. SCOPE AND APPLICATION

This Integrated Pest Management (IPM) policy shall apply to all pest control and pesticide use in buildings and related facilities; grounds and open space; and other property owned by the City of Boulder. City officers, employees, contractors, and community agencies receiving payment for services from the City are required to follow this policy.

II. PURPOSE

The City of Boulder seeks to implement an effective and efficient IPM policy. The main objectives of this policy are to encourage planning and implementation of an IPM program and to provide procedural guidelines for implementation.

The IPM policy emphasizes the selection of the most environmentally sound approach to pest management, with the overall goal of reducing, and where possible eliminating, the dependence on chemical pest control strategies.

III. DEFINITIONS

A. Integrated Pest Management (IPM): a decision making process which selects, integrates, and implements pest control strategies to prevent or control pest populations. Integrated Pest Management uses a "whole systems approach", looking at the target species as it relates to the entire ecosystem. Minimal impacts to human health, the environment, and non-target organisms are considerations in choosing control strategies.

B. Pest: any insect, snail, slug, rodent, nematode, fungus, weed, or any other form of plant, animal, virus, bacterium, or other microorganism which is declared a pest by the Colorado State Department of Agriculture or which is considered a pest under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), except those on or in the human body or in other living animals;
OR:
As defined in the department or division IPM plan.

C. Pesticide: any substance or mixture of substances intended for destroying or

repelling any pest. This includes without limitation fungicides, insecticides, nematicides, herbicides, and rodenticides and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant. The following products are not pesticides:

(1) Deodorizers, bleaching agents, disinfectants and substances for which no pesticidal claim is made in the sale or distribution thereof; and

(2) Fertilizers and plant nutrients.

D. Reasonable Alternative: a feasible option for pest control which takes into account the economic, social, and environmental costs and benefits of the proposed choices.

IV. DEPARTMENTAL/DIVISIONAL OBLIGATIONS

A. Integrated Pest Management Plan

The following departments have been identified as using or potentially using pesticides: Open Space/Real Estate, Parks and Recreation, Public Works, and Housing and Human Services. Each of these departments, or divisions thereof, and any others using pest control methods in the future, shall use the procedures outlined in this policy to develop a departmental or divisional Integrated Pest Management Plan (IPM); and shall designate at least one staff member as the departmental/divisional IPM coordinator by July 1993.

To summarize departmental obligations under this policy:

*__Departmental/divisional IPM plan__. This plan shall be submitted to the City Manager/Environmental Affairs Office in March of 1994 and shall be updated at least every five years.

*__Annual IPM report.__ Each department using pest control methods shall submit an annual IPM report to the City Manager beginning in March 1995. This annual IPM report will detail the previous years IPM efforts. The report shall contain information as outlined in the "Record-keeping and Evaluation" section below:

__Record-keeping and Evaluation__--Each department or division shall keep accurate records of how, when, and where various treatments are used and what the results are -- including effects on non-target organisms and sensitive values (e.g.: wetlands, human health). When combined with the pest monitoring data, this information will enable departments and divisions to evaluate the successes and failures of the IPM program, and to plan more efficient and effective future pest

management strategies. This information should be kept in a log, and used as a basis for the required annual IPM report. It should also be available for review at the interdepartmental IPM review group meetings discussed below.

*__Interdepartmental IPM review group__. This group, composed of department IPM coordinators and Environmental Affairs staff, shall meet 2-4 times per year. These meetings will include review and evaluation of each department or division plan, as well as opportunities for information exchange, education, and cooperation.

*__Contractor Notification.__ Every department bidding out contractual work for pest management applications must inform all bidders of the City's Integrated Pest Management Policy and its guidelines in bid specifics.

V. INTEGRATED PEST MANAGEMENT (IPM) PROCEDURE

The City assumes that all pesticides are *potentially* hazardous to human and environmental health. Therefore, reasonable non-pesticide alternatives shall be given preference over chemical controls by following the IPM procedure. For all pest control problems, the IPM procedure outlined below shall be followed.

A. Initial Data Collection and Monitoring

Each department or division considering pest control measures shall collect baseline data on the pest ecosystem(s) to determine pest population(s) occurrence, size, density, and presence of any natural enemy population(s); gather information on pest biology and different control techniques available; and document sensitive areas and conditions that may limit control options. Data shall be collected in a standardized manner that is repeatable on a yearly basis.

On-going monitoring shall continue to collect the above information. This will help evaluate the effectiveness of various treatment strategies. Departments and divisions shall monitor the effects of various treatments on target and non-target organisms.

All pest-monitoring methods and data shall be specified in the department or division IPM Plan, systematically recorded, and available for review at the interdepartmental IPM meetings.

B. Establishing Injury Levels

To determine if treatment is warranted, an acceptable injury level for each target pest and site should be established by assessing:

1) The tolerable level of environmental, aesthetic, and economic damage as a result of the pest population(s) and the tolerable level of

risk to human health as a result of the pest population(s);

OR

2) The size or density of the pest population that must be present to cause unacceptable environmental, aesthetic, and/or economic damage; and the size, density, and type of pest population that must be present to create a human health risk.

C. Treatment Selection Criteria

Upon determining that treatment is necessary, the following criteria should be used to help select the appropriate IPM treatment strategy:

1) Least-disruptive of natural controls
2) Least-hazardous to human health
3) Least-toxic to non-target organisms
4) Least-damaging to the general environment
5) Most likely to produce a permanent reduction in the environment's ability to support target pests
6) Cost-effectiveness in the short- and long-term

D. Treatment Strategies

This policy enables each department or division to make its own determination about appropriate and effective treatment(s), based on site-specific requirements. Commitment to the most environmentally sound approach, where non-chemical tactics are considered first, is expected. In general, a **combination** of treatments is more effective than a single approach. Departments and divisions are encouraged to seek out and experiment with case studies of successful IPM treatments and to share this information at the IPM meetings. The following treatments are listed in the order in which they should be executed:

1) Prevention

The most effective pest management strategy is to prevent their establishment. By reducing the capacity of the ecosystem to support target pest populations through design and appropriate management, the opportunities for pest establishment can be reduced or eliminated. Strategies can be used to reduce the preferred harborage, food, water, or other essential requirements of pests.

Examples:

a) To minimize the rat problem along Boulder Creek, a preventative strategy could be to change the trash receptacles to rat proof containers, which would reduce the available food supply, rather than relying on chemical control.
b) Using weed-free road base reduces the risk of introducing weeds during road and trail construction and maintenance.
c) Use landscape or structural design that is appropriate to the specific habitat, climate, and maintenance the habitat will receive.

2) Physical

a) Selection and placement of materials that provide life-support mechanisms for pest enemies and competitors

b) Modifying pest habitat by reducing pest harborage, food supply, and other life support requirements

c) Cultural applications such as watering, mulching, waste management, and food storage should be evaluated for optimal pest control; and where appropriate modified accordingly

d) Barriers and traps

f) Heat, cold, humidity, desiccation, or light applied to affected region

3) Mechanical

a) Mowing

b) Burning

c) Hand-pulling of weeds

d) Grazing

4) Biological

Biological controls include the introduction or enhancement of natural enemy populations to target pests. Introduction of non-indigenous organisms has an associated risk factor and should be thoroughly evaluated prior to implementation.

a) Conservation and augmentation of the pest's natural enemies

b) Introduction of host-specific enemy organisms

5) Chemical

All pesticides shall be assumed to be *potentially* hazardous to human and environmental health.

a) The type, methods and timing of chemical treatment shall be determined **after** consideration has been given to protection of non-target organisms and water quality; pest biology; and anticipated adverse weather (winds, precipitation, etc) -- so as to be most effective and safe considering human and wildlife activity in the area, temperature and soil types.

b) Potential chemical approaches

1) pheromone and other attractants to confuse pests and/or act as bait

2) juvenile hormones that arrest pest development

3) repellant

4) allelopathin

5) sterilants or contraceptives to reduce breeding

6) contact, stomach, or other poisons
7) fumigants
8) combinations of above (baits with poisons)
9) herbicides, insecticides

c) All pesticides shall be applied in conformance with label specifications, and all applicable federal, state, and municipal laws, regulations, and ordinances.

E. Education/Awareness

Education is a critical component of an IPM program. Each department or division shall make their IPM plan available to the public. Press releases, signage, Channel 8, brochures, and staff presentations can be used to inform staff and citizens about IPM goals and objectives. Information should be made available on how the IPM strategies compare to techniques relying exclusively on pesticides.

VI. OTHER ISSUES

The interdepartmental IPM review group shall also review interdepartmental issues such as procurement policies that advance the objectives of the IPM policy and reduce reliance on chemical control. For example, procurement of road material and aggregate would, where economically feasible, specify and give preference (or utilize a dual track bidding process) to the purchase of weed-free products that minimize the need for current or future use of chemical pest control measures.

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