INTEGRATED PEST MANAGEMENT (IPM) PLAN

DECEMBER 2018

THE PURPOSE OF THIS INTEGRATED PEST MANAGEMENT (IPM) PLAN IS TO GUIDE THE USE OF ENVIRONMENTALLY SENSITIVE PEST MANAGEMENT STRATEGIES AND LEAST HARMFUL CONTROL METHODS IN THE CITY OF COSTA MESA TO ENHANCE THE HEALTH AND SAFETY OF THE GENERAL PUBLIC; AND TO PROTECT THE ENVIRONMENT.

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GOALS

Goals

The Goals of the IPM Program for the City of Costa Mesa:

1. Protect human health and the surrounding environment by employing a range of preventative strategies and using least harmful products for pest control and eradication.
2. Inspect and monitor pest populations to enhance control strategies.
3. Minimize the quantity and toxicity of chemicals used for pest management.
4. Minimize environmental impacts by using species-specific pesticides and targeting application areas carefully.
5. Establish clear criteria for acceptable circumstances in which using a pesticide other than a least harmful pesticide is necessary; toxic pesticides shall only be used when there is a threat to public health and safety, or to prevent economic or environmental damage.

City-wide Pest Management Guiding Principles for the City of Costa Mesa:

1. Emphasize use of effective organic pesticides in and on all City properties whenever practical.
2. Limit exposure to any pesticides where children and the general public congregate.
3. Use EPA Level pesticides in a targeted manner, and only if deemed necessary to protect public health and economic impact by a licensed pest control adviser and City staff, when pests cannot be managed by other methods.

IPM Response Plan

One of the characteristics of an IPM approach that makes it so effective is that the basic decision making process is the same for any pest problem in any location. The strategies and tactics may change, but the steps taken to decide if and when treatment is needed and which methods to use are the same each time. The City of Costa Mesa IPM program is built around the following components:

- Monitoring the pest populations and other relevant factors
- Accurate identification of the pest
- Determining injury and action levels that trigger treatments
- Timing treatments to the best advantage
- Spot treating the pest (to minimize human and other non-target organism exposure to pesticides)
- Selecting least disruptive tactics
- Evaluating the effectiveness of treatments to fine tune future action

Setting Injury and Action Levels

Before any course of action can be determined, it is first important to determine the injury level. The injury level is the level of damage or the level of pest population that causes unacceptable injury. Once the injury level has been determined, an action level must be set. The injury level will always be higher than the action level, meaning that action should occur before the situation progresses the point of unacceptable injury (see Fig. 1). The action level is the level of pest damage or number of pests that triggers treatment to prevent pest numbers from reaching the injury level.

Aesthetic injury applies mainly to the damage of plants. This is injury that affects the appearance without affecting the health of the plant.

Economic injury refers to pest damage that causes monetary loss.

Medical injury relates to human health problems or safety issues caused by pests.

Monitoring:

1. The Maintenance Services Division shall regularly monitor landscaping services for all City properties.
2. The Maintenance Services Division shall determine if pest populations are increasing, decreasing, or staying the same and to determine when to use a control tactic.
3. The Maintenance Services Division shall prepare monthly monitoring records, which include location, application dates, pests to be treated, and material used.

Prevention:

The City shall use the following methods as the first and primary means for controlling pests and preventing outbreaks:

a. Use mulch and other landscaping best practices to promote soil and plant health.
b. Use weed-free soil amendments.
c. Maintain and plan landscape features to eliminate safe havens for pests and rodents
d. Clean up plant debris, especially from fruit-bearing trees.
e. Remove invasive plants that are known to harbor or provide food for pests.

Criteria for Selecting Treatment Strategies

Once the IPM decision making process is in place and monitoring indicates that pest treatment is needed, the choice of specific strategies can be made. Choose strategies that are:

- Least hazardous to human health
- Least disruptive of natural controls in landscape situations
- Least toxic to non-target organisms other than natural controls
- Most likely to be permanent and prevent recurrence of the pest problem
- Easiest to carry out safely and effectively
- Most cost effective in the short and long term
- Appropriate to the site and maintenance system
- Non-chemical control options are utilized where feasible.

Treatment Options

Education. Education is a cost effective pest management strategy. Information that will help change people's behaviors, including planting pest-resistant landscape plants, will play a part in managing certain pests.

Habitat modification. Pests need food, water and shelter to survive. If the pest manager can eliminate or reduce the resources pests need to flourish, the environment will support fewer pests.

Examples of habitat modification include: design or redesign of structures and landscape plantings; improved sanitation; eliminating water sources for pests; physical exclusion and eliminating the pest habitat.

Physical controls. Methods of physical control (or direct removal of pests from an environment) include trapping and removing pests by hand.

Biological controls. A biological control uses a pest's natural enemies to attack and control the pest. Biological control strategies include conservation (conserving the biological control application), augmentation (artificially increasing the number of biological controls in a given area) and importation (importing foreign controls).

Least toxic chemical controls. Least toxic pesticides are those with all or most of the following characteristics: they are effective against the target pest, have a low acute and chronic toxicity to mammals, biodegrade rapidly, kill a narrow range of target pests and have little or no impact on non-target organisms.

Non-chemical or cultural controls. Modifications of normal plant care activities that reduce or prevent pests; other cultural control methods include adjusting the frequency and amount of irrigation, fertilization, and mowing height.

These include materials such as the following:

- Pheromones and other attractants
- Insect growth regulators
- Repellents
- Desiccating dusts
- Pesticidal soaps and oils
- Some botanical pesticides

The following criteria should be used when selecting a pesticide:

- Safety
- Species specificity
- Effectiveness
- Endurance
- Speed
- Repellency
- Cost

General Preventative Practices

General preventative practices are simple landscaping procedures that eliminate sources of food, water and shelter that attract pests to the building grounds. The City of Costa Mesa shall use the following methods as the first and primary means for controlling pests and preventing outbreaks:

1. Use mulch and other landscaping best practices to promote soil and plant health.
2. Use weed-free soil amendments.
3. Maintain and plan landscape features to eliminate safe havens for pests and rodents.
4. Clean up plant debris, especially from fruit-bearing trees.
5. Remove invasive plants that are known to harbor or provide food for pests.

Approvals and Application of Chemical Pesticides

1. Pesticides shall be approved by the Maintenance Division Superintendents for their area of oversight prior to use. A written recommendation of proposed pesticide, including commercial name, concentrations, allocation rates, usage and reentry time shall be prepared by a licensed California Pest Control Adviser and site specific schedule submitted for approval. No work shall begin until written approval of use is obtained and a notice of intent has been filed with the County Agricultural Commissioner's office, as required. Copies of Safety Data Sheets and specimen labels shall be given to the City prior to pesticide use on City property.
2. For Facilities and Building Maintenance, the referenced responsibilities of a licensed pest control adviser presented throughout this policy are to be performed by a California State Licensed Structural Pest Control Operator.
3. Chemicals shall only be applied by those persons possessing a valid California Qualified Applicator license/certificate; or a Structural Pest Control License. Application shall be in strict accordance with all governing regulations. Records of all operations shall be kept per the California Department of Pesticide Regulations or the California Structural Pest Control Board.
4. Pesticides shall be applied in a manner to avoid contamination of non-target areas. Precautionary measures shall be employed to keep the public from entering the spray zone until it is safe.

Materials for Use – Least Toxic Pesticides

Pesticides shall be approved by the Maintenance Division Superintendents for their area of Chemical pesticides are considered a last resort under the tenets of IPM. This control strategy is to be used in the City of Costa Mesa only when general preventative practices and non-chemical options are known to be, or proven to be ineffective.

a) Organic pesticides shall be the first option when pesticides are needed.

b) Use Clean Water Act (CWA) allowed pesticides.

c) EPA Level III "caution" label pesticide only if deemed necessary to protect public health, economic loss or damage to infrastructure by a licensed pest control adviser and City staff when other methods do not adequately control the pest

d) EPA Level II "warning" label pesticides, only if deemed necessary to protect public health, economic loss or damage to infrastructure by a licensed pest control adviser and City staff, when other methods do not adequately control the pest.

e) EPA Level I "danger" label pesticides, only if deemed necessary to protect public health, economic loss or damage to infrastructure by a licensed pest control adviser and City staff, when other methods do not adequately control the pest.

RESPONSIBLE PARTIES

Responsible Parties

Maintenance Services Manager is responsible for overseeing the implementation of the IPM plan and ensuring compliance. All pest control vendors contracted to perform work for the City of Costa Mesa are responsible for adhering to this policy.

All pesticide storage, transportation, and application will be conducted in accordance with the requirement of the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code136 et seq.), Environmental Protection Agency regulations in 40 CFR, Occupational Safety and Health Administration regulations, City of Costa Mesa policies and procedures, and other local ordinances.

No person shall apply, store, or dispose of any pesticide on City of Costa Mesa property without an appropriate pesticide applicator license.