



Integrated Pest Management Procedures and Guidelines

ANALYSIS

City Properties

The City of Pacific Grove maintains:

- More than 25 acres of community and neighborhood parks and athletic fields;
- More than 50 acres of public right-of-way, including street medians and parkways;
- 7,394 City-maintained trees, 623 planting areas trees; and
- Nearly 200,000 square feet of facilities.

Background

Historically, the City and its agents have applied pesticides, herbicides, and Kaput Ground Squirrel Bait to control the following in or on City properties:

1. Broadleaf and grassy weeds in turf, hardscapes, undeveloped rights-of-way, bike trail edges, tree well and planter areas;
2. Rodents;
3. Insects in trees, planters, and buildings; and
4. Soil pathogens/fungi and termites. Pests controlled in interior facilities include ants, spiders, rodents, and roaches.

Purpose

The purpose of these procedures and guidelines is to provide the City of Pacific Grove and its employees and contractors with an overview of integrated pest management (IPM) principles, procedures, and guidelines for implementing those principles. It is expected that these procedures and guidelines will ensure that all City operations and contracted services that manage pests or vegetation on City property do so in an environmentally sensitive manner while addressing public health, safety, economic, and aesthetics requirements.

The goals of these guidelines are to:

- 1) Create awareness among City staff and citizens of integrated pest management techniques and environmental stewardship.
- 2) Provide a means of educating all City departments to practice the most appropriate approach to managing pests on City property.
- 3) Reduce and eliminate pesticides and herbicides that pose known significant human or animal health, or environmental risks.
- 4) Establish a program where pesticides and herbicides categorized as toxic or persistent are used only when a pest is deemed a threat to public health, safety, the environment, or to prevent economic damage (emergency or exception) and only after other alternatives have been attempted and are ineffective. If pesticides and herbicides are used, provide guidelines on safe storage, handling, use, and application.
- 5) Promote the use of non-hazardous or reduced risk alternatives that are protective of human and animal health and the environment.

Guidelines

In carrying out its pest management operations, the City of Pacific Grove shall focus on long-term prevention or suppression of pest problems with minimum negative impact on human health, non-target organisms, and the environment. To this end, preference shall be given to reasonably available non-pesticide alternatives when considering the use of pesticides and herbicides on City property. Consideration will also be given to evolving rodent birth control technology for uses in pest control. However, moderation of organic alternatives will also be observed as to not introduce or substitute one environmental issue for another since the excess use of organics also comes with negative side effects.

When possible, City staff must employ non-chemical management tactics first.

Pesticides and herbicides shall be applied by a qualified applicator that has been trained in application methods. Applicators should be versed in techniques, safety precautions, pest biology, proper use of personal protective equipment, proper storage, handling, environmental concerns, employee rights regarding pesticide, Department of Pesticide Regulation, State, and Monterey County guidelines.

Pesticides and Herbicides Use

Pesticides and herbicides will be used only in authorized situations where other alternative methods have proven not to be effective or feasible (e.g., cannot be sustained due to budgetary or other constraints). The following general and specific practices shall be followed:

General

1. When used, those pesticides and herbicides with the least toxicity to humans and the environment shall be applied. No Category 1 pesticides and herbicides shall be used within the city limits except with the specific pre-authorization of the City of Pacific Grove Department Directors or designee to protect the health or safety of the public.
2. Prior approval of a Supervisor, IPM Coordinator or their designee is required for all applications.
3. Applications shall be performed by or under the supervision of a qualified applicator to avoid any hazard to any person or animal in the area or adjacent areas and to avoid any property damage.
4. Application(s) shall be made at the time of the treatment of weeds' most susceptible stage.
5. Care shall be observed not to damage non-targeted vegetation, especially when applying a non-selective herbicide.
6. Spraying shall be confined to target species and drift must be avoided.

Specifics

No pesticides and herbicides are to be applied within 50 yards of any designated playground adjacent to PGUSD areas unless conditions call for control of a hazardous or noxious pest or weeds. In this case, the area would be closed until re-entry is deemed safe.

No pesticides and herbicides shall be sprayed when weather conditions are:

- More than 5 miles per hour winds
- Damp or foggy
- Rainy
- Extremely cold or hot

Pesticides and Herbicides Training

Person(s) applying pesticides and herbicides that are not licensed must have pesticide safety training before the use of each pesticide, regardless of toxicity. Training must be updated annually. A record must be made of each employee applying pesticides and herbicides, and evidence of training certified by the trainer/supervisor. Copies of the record form will be kept by the employee and the City department, and be available to local and State officials.

Training requirements

Training must be performed by a qualified person and cover the following for each pesticide handled:

1. Information on the pesticide label concerning human health effects.
2. Hazards of the pesticide, including acute and long-term effects.
3. Pesticide poisoning symptoms and routes pesticides and herbicides can enter the body.
4. Emergency first aid and how to get emergency medical care.
5. Routine and emergency decontamination procedures.
6. Need for, limitations, use, and cleaning of personal protective equipment (PPE).
7. Prevention, recognition and first aid for heat-related illnesses.
8. Safe procedures for handling pesticides and herbicides, including engineering controls.
9. Environmental concerns, such as drift and runoff and stormwater quality impacts.
10. Warnings against taking pesticides and herbicides home.
11. Regulatory requirements, including Material Safety Data Sheets (MSDS) and Pesticide Safety Information Series (PSIS).
12. Purpose and requirements of medical supervision, when applicable.
13. Location of hazard communication information.
14. Employee rights.

Personal Protective Equipment (PPE)

The City of Pacific Grove will provide personal protective clothing and equipment to City personnel engaged in the application of pesticides and herbicides on City of Pacific Grove property as stated on the manufacturer's label. Contractors are required to provide their own PPE.

Documents Required While Applying Pesticides and Herbicides

Any person applying a pesticide on City of Pacific Grove property must have in their possession the following documents:

- Pesticide label
- Pesticide MSDS
- Medical Emergency Contact Information

Reporting of Pesticides and Herbicides Use

At the end of each month, each Crew Supervisor will complete a Monthly Chemical Use Report form and return it to the IPM Coordinator or designee. The City of Pacific Grove must then complete a Monthly Summary Pesticide Use Report by the tenth of each month.

Storage and Disposal

All pesticide storage locations must be posted with visible warning notices legible from a distance of 25 feet from any direction in English and Spanish. Any pesticide containers holding 1 gallon or less of concentrate and 3-gallon backpack sprayers with diluted pesticides and herbicides must be transported outside of the vehicle cab in a manner that will prevent spillage onto the vehicle or off the vehicle.

Empty pesticide containers, other than bags, must be rinsed and drained into the spraying equipment on site by the user, at the time of use, using the triple rinse method. Rinse solution should be applied to the treated areas.

All pesticide containers must be labeled with the following information:

- Name of pesticide
- Category of pesticide
- EPA registration number
- Active ingredient
- Entity

Small spills of pesticides and herbicides should be cleaned up immediately with absorbent material such as cat litter. For major toxic pesticide spills, contact Public Works and request Emergency Response Personnel. Note what pesticide it is, category, and if it is threatening to enter the storm drain system.

Violation Documentation

An employee of the City of Pacific Grove who has been trained to apply pesticides and herbicides may be required to do so as part of their regular duties. Those who possess Qualified Applicator Certificates (QAC) from the California Department of Pesticide Regulation (DPR) are subject to discipline by the DPR via the Monterey County Agricultural Commissioner if they violate various DPR regulations such as improper safety gear, improper posting as well as other items. Those employees will also be subjected to the City of Pacific Grove Personnel Rules and Regulations as outlined below. Contractors hired by the City of Pacific Grove should follow discipline procedure according to City of Pacific Grove maintenance contract and the IPM procedures and guidelines. Those employees who do not possess a Qualified Applicator Certificate will be reprimanded by the City of Pacific Grove if they violate DPR regulations. The disciplinary actions for violations are to be determined.

Procedure

1. Consider the potential pest treatments and determine appropriate treatment during ongoing maintenance.
 - 1.1 In consultation with the IPM coordinator, the field supervisor shall determine the most effective treatment time, based on pest biology and other variables, such as weather and local conditions.
 - 1.2 Landscaping practices, including watering, mulching, waste management, and food storage must be taken into consideration by staff before applying any pesticide.
 - 1.3 When possible, pest ecosystems must be modified by staff to reduce food and living space.
 - 1.4 Staff should use physical or mechanical controls such as hand-weeding, traps, and barriers when possible.
 - 1.5 Staff should use biological controls, including introducing or enhancing pests' natural enemies.
2. Pesticides, Herbicides, and Rodent Application Protocol.
 - 2.1 Notify your crew supervisor of possible need for pest control at the site.
 - 2.2 Send the completed Pesticide Application form via email to the IPM coordinator before the proposed pesticide application, ideally the afternoon before the scheduled day of application.
 - 2.3 Gather all personal protective equipment (PPE), documents, and signage required to complete the specific pesticide application and have all of these items in your possession during the application.
 - 2.4 Apply pesticide and do not leave site unattended until spray has dried.
 - 2.5 Document pesticide usage.
 - 2.6 Complete the Monthly Chemical Use Report by the last calendar day of the month and turn into the IPM Coordinator or designee before or by the 7th of the following month.
 - 2.7 City of Pacific Grove IPM Coordinator or designee must complete and submit the Monthly Summary Pesticide Use Report to the County Agricultural Commissioner's Office within the first ten days of the following month.
 - 2.8 All City of Pacific Grove contractors shall follow the pesticide application procedure defined in the Contractor Maintenance Contract.
3. Conduct ongoing training programs.
4. The IPM coordinator and department supervisors trained in pest control shall train staff in pest biology, the IPM approach, new pest management strategies as they become known, and toxicology of pesticides and herbicides proposed for use.
5. Conduct ongoing public outreach and education.
 - 5.1. The IPM coordinator shall inform the public of the City's procedures and guidelines to reduce pesticide use and respond to questions from the public about the City's pest management practices.
6. When planning new projects or renovating existing areas, the design must be reviewed by the IPM coordinator and staff overseeing both the initial design and future maintenance to assure that pest habitat are eliminated or reduced. This process will result in a more sustainable design.

Integrated Pest Management Coordinator

The IPM Coordinator shall be responsible for:

1. Coordinating efforts to adopt IPM techniques for the City of Pacific Grove.
2. Communicating with appropriate staff on the goals and guidelines of the program.
3. Providing training to Parks and General Services, Public Works and other City staff in the requirements of this IPM procedures and guidelines as well as preparing individuals who handle pesticides and herbicides in obtaining a QAC.
4. Facilitating meetings with the City's commissions and City Council.
5. Tracking all pesticide use and ensuring that the information is available to the public.
6. Coordinating with other public agencies that are practicing IPM programs.
7. Filing monthly pesticide use reports with the County and renewing bi-annual pesticide permit.
8. Serving as public information officer in coordination with the Environmental Compliance Coordinator on IPM and pesticide related issues.
9. Keeping current on all Federal (EPA), State (DPR) and local regulations and provide updates to department personnel.

GLOSSARY

Biological control – This method uses biological technologies to manage unwanted pests. Examples of this type of control include, but would not be limited to, the use of pheromone traps for the management of Indian meal moth in food storage/preparation areas, or beneficial insect release for control of certain types of weeds or invasive insects in landscapes.

Category 1- The four toxicity categories, from one to four are:

- Toxicity category I is Highly toxic and Severely irritating,
- Toxicity category II is Moderately toxic and Moderately irritating,
- Toxicity category III is Slightly toxic and Slightly irritating,
- Toxicity category IV is Practically non-toxic and not an irritant.

Contract- A binding written agreement between two parties. Contracts entered into the pesticide realm are generally for goods or services.

Contractor- A person, firm, corporation, or other entity, including a governmental entity, that enters into a contract.

Cultural control - Is the practice of modifying the growing environment to reduce the prevalence of unwanted pests. Examples include irrigation practices, improved and reduced fertilization applications, proper mowing practices that include mulching, and regular aeration to improve the soil.

DPR - Department of Pesticide Regulations for the State of California's Environmental Protection Agency. DPR, in partnership with Federal EPA and County Department of Agriculture, oversees all issues regarding the registration, licensing and enforcement of laws and regulations about pesticides and herbicides.

Emergency- A pest outbreak that poses an immediate threat to public health or significant economic or environmental damage.

Environmental Stewardship - The strategic approach to pest management in which the IPM practitioners find balance in preserving the natural integrity and health of the environment, promoting public safety and maintaining functional utilities while recommending or applying pest management methods. Environmental Stewardship philosophy helps to create awareness of Best Management Practices and their relationship the healthy environment while conducting pest management activities.

EPA- The United States Environmental Protection Agency

Exemption- A process by which materials not on the approved materials list, can temporarily be used, but only after all alternatives have been reviewed, evaluated, and or implemented and only after the IPM Coordinator has authorized the use of the pesticide for the specified purpose.

Exemptions may be one-time or programmatic, and the decision to approve an exemption will be based upon an evaluation of the failure or success of alternatives and take into consideration public health, environmental, and financial risks.

IPM Coordinator- An individual who is tasked with the function to administer the IPM program for a project or the City of Pacific Grove.

Integrated Pest Management (IPM) - A decision-making process for managing pests that use monitoring to determine pest levels, tolerance thresholds, combines biological, cultural, physical, chemical tools to minimize health, environmental, and financial risks. The method uses extensive knowledge about pests, such as infestation thresholds, life histories, environmental requirements, and natural enemies to compliment and facilitate biological and other natural control of pests.

Landscapes- Grounds that are actively managed such as parks, plantings, lawns around public buildings, right-of-ways, watersheds, and open space, etc., excluding large tracts of forestland.

Mechanical controls – The use of IPM control methods utilizing hand labor or equipment such as mowers, graders, weed-eaters, and chainsaws. Crack and crevice sealants and closing small entryways (e.g., around pipes and conduits) into buildings for insect and rodent management would also be mechanical methods.

Nurse Tanks- Commonly used to transport various agricultural chemicals and liquids to the point of application.

PCA – PCA or Pest Control Advisor is one licensed by the California Department of Pesticide Regulations according to Title 3, Article 5 of the California Code of Regulations. Only a licensed PCA, who is registered with the County Agricultural Commissioner may provide written pest control recommendations for agricultural pest management, including parks, cemeteries, golf courses, and rights-of-way.

Pesticide- Any substance, or a mixture of substances, used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, which may be detrimental to vegetation, humans, animals or structures.

QAC - Qualified Applicators Certificate is a certified applicator of pesticides and herbicides according to Title 3, Article 3 of the California Code of Regulations. Applications may include residential, industrial, institutional, landscape, and rights-of-way sites.

Sustainable Design, Construction, and Maintenance- Principles, materials, and techniques that conserve natural resources and improve environmental quality throughout the lifecycle of the landscape and its surrounding environment. Sustainable designs for buildings and landscapes incorporate methods that reduce the potential for pest problems from the start and with long-term maintenance needs in mind.