

#### 2.4. c. Pest Management and Disease Control

It is the policy of the Park District of Oak Park that Integrated Pest Management (IPM) will be used to prevent and control pest problems in all parks and facilities maintained by the District. The principles of IPM require that non-chemical methods of pest control be given preference over chemical controls and the least hazardous chemical controls be given preference over other chemical controls.

The goal of IPM is the reduction of chemical pesticides used in outdoor landscapes and indoor facilities. IPM usually results in a graduated response to any potential problem, with natural control methods being employed first and chemical pesticides used only as a last resort. In the park setting, IPM has become standard practice for many public agencies, which must consider the health of patrons, including young children and people with chemical sensitivities. Instead of relying on pesticides as the first choice for managing pest problems, IPM uses a hierarchy of pest control methods to maintain pest populations at or below levels determined by park management.<sup>2</sup>

##### **IPM Method Hierarchy**

1. **Natural controls:** create habitat for natural predators of pest insects. For example, through the use of companion plantings that attract beneficial insects to reduce pest problems in gardens.
2. **Cultural controls:** maintain the site in a way to discourage pests. For example, maintain grass height of 2” or 3” to shade out weeds.
3. **Physical controls:** use controls that physically inhibit pests’ ability to inhabit an area by modifying their environment. Examples of physical controls include the use of traps and barriers, temperature controls, controlled burning or hand pulling of weeds.
4. **Biological controls:** use a pest’s natural predators or parasites to eliminate or reduce the pest population. For example, a bacterium called milky spore can be used to control Japanese beetle grubs in turf.
5. **Structural controls:** use a whole-systems approach to control pest populations, which may include addressing structural issues in both buildings and landscapes. Examples of structural controls include adopting long-term maintenance practices such as caulking and sealing, and repairing the building or landscape to remove places where pests may breed, such as removing indentations in the earth that cause puddles where mosquitoes may breed.
6. **Least Toxic Chemical controls:** when all other methods have not brought pest populations to tolerable levels, chemical controls that are the least hazardous to the environment and non-target or beneficial organisms should be considered.

To be effective, IPM requires that a staff member or a contracted employee be knowledgeable in the identification of insect pests and plant diseases, since early recognition of problems is crucial. Monitoring and identification removes the possibility that pesticides will be used when they are not really needed, or that the wrong kind of

pesticide will be used. This allows treatments to be small scale and localized. Waiting for a problem to become an infestation requires a more extensive response (i.e. larger quantities of and often more potent pesticides). Natural control methods (companion plantings, soil treatments, natural predators) are normally utilized to maintain a more natural balance of pests and predators, which means that the presence of some pests must be tolerated. In some instances, signage may be necessary to educate park users who see some creatures as pests and are unfamiliar with the workings and benefits of IPM.<sup>2</sup>

### **Benefits of This Strategy**

- Protects patrons from possible exposure to pesticides and herbicides.
- Reduces workplace safety concerns when reduced quantities of toxic materials are used for maintenance.
- Can reduce operational expenses since necessary pesticide applications will be smaller in scale.
- Protects both surface and ground water from potential contamination.
- Protects wildlife and the habitat they live in from contamination
- Can improve the PDOP's public image due to promotion of the voluntary adoption of efforts to reduce pesticide use in the community.

### **Implementation**

Some short-term, non-chemical, weed-reducing solutions include: mechanical removal of weeds by pulling or mowing, inhibiting weed growth via weed trimmer, flaming weeds with a hand-held torch, and applying very hot water or steam to weeds.

Long-term weed control methods include the introduction of predators such as beetles or other plants, landscape modifications to the site such as changes in light, water, topography, plantings, or soil, and laying down cloth to smother the weeds or serve as a barrier.

When a pest problem has been identified as existing and is creating an unacceptable level of environmental, aesthetic or economic damage or creating risk to human health, then treatment options must consider the following criteria.

1. Least hazardous to human health
  2. Least disruptive to natural controls
  3. Least toxic to non-target organisms
  4. Least damaging to the environment
  5. Most likely to produce a permanent reduction in habitat conducive to pest populations
  6. Cost effectiveness over a reasonable term such as 2 to 5 years
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### **Pesticide Selection**

A Signal Word on the pesticide label is required for all registered products, indicating the acute toxicity. The Signal Words and associated toxicity categories are as follows:

Category I	DANGER (Most Toxic)
Category II	WARNING
Category III	CAUTION
Category IV	None required but if used means Caution – least toxic

To ensure the safety of the public and staff, the District will use the following criteria to ensure that the least hazardous pesticide and/or the least hazardous method of control be utilized

1. The District will not use any pesticide classified as acutely toxic by the U.S. EPA. This includes Hazard Category I and Category II, signal words DANGER and WARNING. Currently, only one herbicide has been approved for use in the parks. Glyphosate has been approved for weed control in difficult areas such as fence lines, brick pavers or ball diamond infields.
2. The District will not use any pesticide unless the product has been evaluated by the U.S. EPA and found to include no possible, probable, known, or likely human carcinogens; no reproductive toxicants; no known, probable or suspected endocrine disruptor; and no nervous system toxicants (either cholinesterase inhibitors or listed as neurotoxins by the Toxics Release Inventory.)
3. All ingredients in pesticides used by the District must have a solid half-life of 30 days or less.
4. No high volatility formulations will be used.
5. No “restricted use” pesticides will be used.
6. Preference will always be given to organic herbicides over more toxic chemicals. Products such as acetic acid, sold under the trade name of “Burn Out” or plant oil combinations with a fatty acids base sold as “Scythe” fall into this category.

### **Pesticide Use**

The safety of the public, park district employees, and the environment will be given primary consideration in the selection and use of any pesticide. Park District employees and contracted employees must use, store, handle, or dispose of a pesticide, pesticide rinse, pesticide container, or pesticide application equipment in a manner that:

1. Is consistent with the product labeling, and Illinois Department of Agriculture regulations

2. Does not endanger humans, food, livestock, fish, wildlife, or beneficial insects
3. Does not cause unreasonable adverse effects on the environment
4. Does not direct a pesticide beyond the boundaries of the target treatment site or result in damage to adjacent property.
5. Does not result in pesticide application on any human

Park District employees must not mix or apply pesticides unless they are wearing appropriate protective clothing and they have received proper training in the safe use of the pesticide product. Employees and contracted employees must be licensed as an applicator or operator by the Illinois Department of Agriculture.

Pesticide use notices must be conspicuously posted in one or more locations at the site of the application. It will specify the pest, manner of application, date of application and location. It will contain a caution not to enter the area until the date specified and contact information for the Park District employee who is responsible for investigating complaints and answering questions about the application. Park perimeters will be marked with flags posted around the sprayed area.

### **Procurement**

Any product acquired for pest or disease control must be accompanied by a Material Safety Data Sheet (MSDS). MSDA sheets will be available and accessible for employees and residents to view at any time. Products must be purchased from reputable suppliers in the manufacturers' container. The supplier must be licensed to sell pesticides.

### **Storage**

All pesticides will be stored in a secure manner that does not allow the products to escape the packaging or the storage area and endanger human health, contaminate other products, or harm the environment. Storage will be in compliance with all directions listed on the manufacturer's label and in compliance with all pertinent laws, rules, regulations, and local ordinances. Storage buildings and areas will have equipment to effectively handle any emergencies that might reasonably be expected to occur. Incompatible hazardous substances and pesticides will not be stored in the same area. For instance, fertilizers and pesticides should not be stored in the same room.

### **Disposal**

Disposal of pesticides and fertilizers and their containers will be done in accordance with label instructions and applicable state and federal laws and regulations. All pesticide containers must be triple rinsed immediately when emptied and the rinse water must be added to the sprayer tank for proper disposal.

### **Spills**

Appropriate cleanup supplies and equipment shall be maintained to handle pesticide and fertilizer spills incurred by Park District employees. All hazardous materials spills or releases will be disposed of according to the appropriate state agency's directives.

### **Pesticide Use by Outside Groups on Park District Property**

Any pesticide application done on Park District property by commercial pesticide applicators will be performed under contract with the Park District of Oak Park. Contractors must comply with the Park District's Integrated Pest Management Policy. Contractors must acquire a pesticide application permit from the Superintendent of Buildings and Grounds prior to the application of a pesticide or herbicide. After the proper permit is acquired, the contractor must be accompanied by a District employee who will monitor for proper application.

### **Record Keeping**

The Park District will keep records of all pest control measures, pesticides used, and amounts and locations of treatments. Pesticide use records, pesticide Material Safety Data Sheets, pesticide product labels, and available manufacturer information about inert ingredients will be kept on file with the Superintendent of Buildings and Grounds. Additionally, records of all pest control actions are to be maintained including information on the number of pests or other indicators of pest activity that can verify the need for action. These records will be made available upon request to staff and the general public during normal operating hours and will be kept for at least five years.

### **Training**

Training is a critical component of a successful IPM program and the Park District will encourage training for employees in all aspects of IPM including pest identification. New methods for natural, cultural, physical and biological control will be learned and transmitted to employees.

### **Role of Greening Advisory Committee (GAC)**

The GAC will monitor and evaluate the use of IPM on an annual basis to determine the program's overall effectiveness in managing pest populations. This assessment will include an evaluation of all chemical applications, as well as any new information on the hazards of chemical controls. The objective is to improve the system and eliminate any ineffective and unnecessary treatments. The GAC will ensure that outside contractors are informed of their obligation to comply with the District's IPM program. The GAC will be responsible for keeping the public informed of the District's IPM program and the methods of implementation. The GAC will respond to requests for information from the public or direct them to an appropriate member of the staff.

## **Definitions**

Broadcast – the application of granular formulated pesticides to broad expanses of surfaces. An example includes application of pesticides to lawns.

Pests – any unwanted insects, plants, fungi or rodents.

Pesticide – any substance or mixture of substances designed or intended for use to prevent, destroy, repel or mitigate pests, or to be used as a plant growth regulator. Pesticides include, but are not limited to, insecticides, herbicides, fungicides, baits or traps and certain pest-specific compounds of biological origin aimed at disrupting the life cycle of the pest.

## **References**

2. Integrated Pest Management for Park Districts, Safer Pest Control Project