

Environmental Guidelines for Plant Health Care and Pest Management

The Environmental Committee of the Elmhurst Park District recommends the use of the following horticultural guidelines in Parks Maintenance departments:

- Use a Plant Health Care approach to landscape management.
- Follow Integrated Pest Management principles when managing pest populations.
- Use established State of Illinois programs to set further guidelines for safety and training.

Plant Health Care

A Plant Health Care (PHC) approach emphasizes the production of healthy, attractive plants by taking a holistic approach to the landscape as a living ecosystem.

The major components of a PHC approach include:

- Identifying plants in the landscape
- Monitoring and identifying key problems
- Studying the ecosystem for solutions to these problems
- Optimizing plant health by providing a suitable environment for growth
- Using Integrated Pest Management principles when necessary
- Promoting plant health through preventative measures (i.e. pruning for plant health, planting a suitable plant for the location, establishing a suitable soil, etc.)

When an identified problem has been determined to be primarily caused by a pest population, PHC employs an Integrated Pest Management program to deal with the pest while continuing to promote overall plant and landscape health.

Integrated Pest Management

A pest is defined by the Illinois Agricultural Extension as any “organism that is injurious to humans or their structures or to plants or animals of interest to humans.” Effectively managing Park District land often involves the management of landscape pests.

The Park District recognizes that improper chemical use can be harmful to plants, animal life, and the overall environment; and, because of this, the District tries to minimize its use of chemicals by practicing Integrated Pest Management (IPM). IPM is an approach to pest control recommended for efficiency and minimal environmental impact by the University of Illinois and Illinois Department of Agriculture.

The goals of IPM are to maintain pest populations below a set threshold and to avoid adverse effects on humans, wildlife, and the environment. IPM stresses that alternatives should be investigated and tried before resorting to a chemical solution to a pest problem. IPM requires knowledge and a level of expertise in plant management, the environment, pest/problem identification and possible alternative solutions.

An IPM program includes the following:

- Correct identification of the pest or problem,
- Scouting for changes in pest population,
- Knowledge of proper plant and landscape management,
- Investigate all forms of control or change in management that may solve the problem without chemicals,
- Determine appropriate response, if any, to pest population,
- Manipulation of cultural management practices: create and maintain a vigorous plant stand, mulch, ground cover, crop rotation,
- Mechanical: pull, hoe, cultivate, mow, prune,
- Biological: insect predators, diseases ,

- Preventative: quarantine, use of pest resistant species
- Chemical: use of thresholds and correct timing.

As part of our IPM program:

- Staff should examine pest threshold levels (weeds, insect damage, and disease) for park maintenance on a regular basis. Thresholds should be established for:
 - Weeds in brick walkways,
 - Areas before any major events,
 - Turf areas,
 - Insect damage on plant life,
 - Weeds in landscape beds,
 - Any other area where pests are a concern.
- Any employees that apply chemicals will attend trainings as required by the Illinois Department of Agriculture.

Pesticides

When the use of chemicals is deemed necessary, best management practices as well as State and Federal Laws are followed. These include:

- Applying pesticides
- Storing pesticides in a safe manner.
- Making accessible SDS sheets on all chemicals in use
- Providing Personal Protective Gear (PPE) for all applicators.
- Posting information about pesticide usage
- Keeping records of all pesticide applications.

Fertilizers

In certain cases, plants benefit from the application of chemical nutrients to the foliage of the plant or soil. Excessive amounts or misapplications of fertilizer can be detrimental to both the targeted plants and the environment. Trained applicators use proper procedures and equipment to apply fertilizers in the correct amount and at the right time.

Site specific fertilization plans are developed when needed using PHC principles to optimize plant health. When appropriate, soil tests will be used to develop a fertilization plan. Materials and application timing are selected to maximize efficiency and the overall health of the landscape.

For Further information

For those interested in more information concerning pesticides and their use, the State of Illinois training manuals are available from the Division Manager of Parks, the Chief Horticulturalist, or the Golf Course Superintendent.

The Illinois General Standards manual is for all entry level applicators and gives an excellent introduction to pesticides and Integrated Pest Management.

The Illinois Applicator manuals are specific to one type of pesticide application and provide more detailed information on pesticide use in turf grass, ornamental plants, greenhouses, forestry, mosquito abatement, aquatic weeds, field crops, and roadsides.