



Parks & Recreation Department  
Standard Operating Procedure

Policy Number: PAR-10-01  
Pages: 1 of 2  
Subject Area: IPM  
Date of Issue: 7/31/08  
Revised: 12/13/16

**Title: Integrated Pest Management**

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Date: 12/13/16

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**IPM:** Is a continuous system of controlling pests (weeds, diseases, insects) in which pests are identified, action thresholds are considered, all possible control options are evaluated, and selected controls are implemented.

**Prevention:** This is the most important component of landscape IPM. Weed problems in landscapes can be largely avoided by careful landscape design which includes soil preparation, proper planting, irrigating, and mulching. Healthy, vigorous, well-adapted plants will be more resistant to both pests and weed species invasion.

**Pests and Symptom Identification:** Proper identification is essential for choosing the right control actions. Accurate identification of plant problems is dependent on a combination of knowledge, observation, and available resources. Patterns in symptoms may provide clues to the cause.

**Regular Surveying for Pests:** Routine inspections of landscapes that systematically check for pest damage symptoms is essential. Developing a routine that is adequate and efficient for the areas under our management is crucial. Frequency of inspection varies with the season, potential problems, plant value, aesthetic value, and resources.

**Action Thresholds and Guidelines:** Before taking any action on pests, IPM first sets an action threshold. Action threshold is a point at which pest populations or environmental conditions indicate that pest control action must be taken. The level at which pests will either become an economic threat or aesthetic threat is critical to guide future pest control decisions.

**Sound Management Control Methods:**

**A) Cultural Controls** are modifications of normal plant care activities that reduce or avoid pest problems. Landscape decisions should include selecting resistant species, proper planting, irrigating, fertilizing, and plant pruning to minimize pest problems. Providing plants with proper care is an important component of pest management.

**B) Mechanical Controls** utilize labor, materials (not usually considered as pesticides), and machinery to reduce pests abundance. Examples of mechanical pest control include mulching, mowing, weed eating, flaming, and hand pulling where appropriate.

**C) Physical Controls** are environmental manipulations that indirectly control or prevent pests by altering temperature, light, and humidity. Physical control methods include; plant thinning to improve air circulation and reduce humidity and mitigating cold damage by covering or adding heat lamps/lights.

**D) Biological Control** is the use of beneficial organisms to control unwanted organisms. Biological control has been used successfully to control insects and mites. For example, Lady Bugs are an effective control for Aphids on roses. Lady Bugs are natural predators of Aphids and can effectively control infestations.

**E) Chemical Control** pesticides are chemicals that control, prevent, repel or mitigate the problems pests may cause. You can quickly obtain temporary control of certain pests if you choose the correct pesticide and apply it at the right time and according to the pesticide labeling. One of the objectives of IPM is to use chemicals less, but it is a misconception that IPM always replaces chemical control. Rather, IPM encourages the pest manager to use chemicals more wisely incorporating chemical control as a component of a comprehensive IPM strategy.

#### **In Summary:**

Integrated Pests and/or Vegetation Management for landscape and roadside maintenance situations involves a strong cultural management program based on a working knowledge of both desirable plant materials and there needs as well as undesirable vegetation and pests species, and the interactions between the two. Cultural measures seek to maintain desirable plant health and vigor, as well as suppression of pest varieties to levels below the Action Threshold.

For landscape and roadside maintenance situations, these thresholds will vary, as uniform aesthetic standards and/or definitions of injury have not been developed for the wide variety of designs, plant materials, and range of personal preferences that come into play.

Thresholds, combined with monitoring by knowledgeable individuals, must still become the determining factor for vegetation or pests control treatments, including the use of chemical pesticides. Target specific selective controls will typically be preferred over non-selective controls and spot treatments rather than comprehensive ones. The normal result will be reduced use of chemical pesticide, but without sacrifice of necessary aesthetic or functional standards.