

NJ Department of Environmental Protection

Integrated Pest Management (IPM) Prerequisites and Minimum Criteria for Roadside Rights-of-Way

General Definition of IPM:

IPM is a sustainable approach to managing pests by using all appropriate technology and management practices in a way that minimizes health, environmental, and economic risks. IPM includes, but is not limited to, monitoring pest populations, consumer education, and when needed, cultivation practices, sanitation, solid waste management, structural maintenance, physical, mechanical, biological and chemical controls.

Prerequisites for IPM:

Education and Training of Field Personnel

The establishment of a training program is essential to the success of IPM. Field personnel should be educated on the philosophy of IPM and the various pest management techniques that can eliminate reliance on pesticides. An overall reduction in chemical controls, along with the appropriate choice of pesticides and application methods through the use of IPM, results in a lower risk and exposure potential for humans, pets and other non-target organisms. Risks and efficacy of both chemical and non-chemical control methods of pest suppression must be considered as part of an overall pest management strategy. They should have field experience and training on plant identification, plant culture, pest identification and control, and the principles of IPM.

IPM training resources are available from Rutgers Cooperative Extension, the Cook College Office of Continuing Education and other educational institutions, in-house workshops and bulletins, environmental advocacy groups, peers within the industry, and pesticide manufacturers.

Credentials of the IPM Practitioner:

The IPM practitioner should have the following credentials:

- ♣ Completion of the Rutgers Landscape IPM Short Course or other comparable course in scope and duration
- ♣ A valid Commercial Pesticide Applicator license issued by the NJDEP
- ♣ Certification in Category 6B (Right-of-Way Pest Control)

Minimum Criteria for IPM:

Monitoring

- ♣ A list of target areas will be compiled. Site inspections will be performed which will produce an inventory and/or map of current woody and herbaceous plant materials and their condition. Key plants and key pests will be noted to determine the control techniques needed, starting with prevention.

Monitoring will include a record of the identity, location and level of the pest(s), the presence of any beneficial organisms, and actions taken.

- ♣ Site visits can be scheduled every seven to 14 days during the season. This will depend on the particular site. No more than 14 days should pass between visits or certain pests could get beyond the level where less toxic control techniques are effective.

Action Thresholds

An action threshold is a level at which some method of control would be initiated. Action thresholds are determined by such factors as severity of the pest problem, impacts on health and safety, economics and aesthetics related to the pest and user needs for the site where the pest is found. Action thresholds are also determined by such factors as safety of the motoring public and the roadway's employees, maintenance of the structural integrity of the roadway and its assets, and public perception and acceptance. The IPM Practitioner and the customer will determine and record tolerance levels for pests and pest damage. This may vary by pest species or type, and site.

Pest Management Methods

Integrated pest management techniques will be used for prevention and suppression of pests. These include:

- ♣ Sanitation and Prevention
 - Street sweeping (sediment removal)
 - Crack sealing (road pavement, concrete, curb lines, etc.)
 - Superficial barriers (asphalt, synthetic and geotextile weed barriers, mulch)
 - Seasonal leaf and brush cleanup
 - Plant health care
- ♣ Cultural and Biological Control
 - Shallow soil disturbance or cultivation
 - Mulching (stone, wood chips, etc.)
 - Proper plant selection (pest resistance, low growth habit)
 - Improvement of turf quality (competition)
 - The use of beneficial organisms to suppress or eradicate pests.
- ♣ Manual and Mechanical Control
 - Weed whips, chain saws, sickles, hoes

When the pest level meets or exceeds the pre-determined level, and pesticides become necessary:

- ♣ Pests should be reduced to below threshold levels.
- ♣ Preserving beneficial plants and other organisms should be considered when feasible.
- ♣ Spot treatments of biological products that target the specific pest will be preferred (but not limited to). Consideration should be given to the products and application techniques that lower the level of risk to humans and the environment.

- ♣ Pesticides shall be applied in accordance with label instructions, at or below label rates, and under appropriate environmental conditions (i.e., no spraying on windy days or immediately prior to forecast of heavy rain).
- ♣ Pesticides should be applied through the use of appropriate drift reduction techniques, such as the use of low-pressure sprayers when possible.
- ♣ Pesticides should be rotated in use, when possible, to prevent or slow the development of resistant strains of pests that would then require more frequent or higher application rates.

Documentation & Recordkeeping

Compile a site-specific history of all monitoring observations, pest infestations, cultural procedures, control measures and pesticide treatments made. This will allow each contractor to note the problems associated with each site. In addition, the principles of an IPM program should be written into the contract.

Accumulated plant and pest knowledge is used to predict, monitor and detect pest outbreaks. Proactive avoidance of pest problems is desired, followed by early detection and early intervention, once pests reach action thresholds.

- ♣ Keep a written record of each site visit. This includes monitoring notes (field and weather conditions, pests and populations present, etc.) control techniques used and related comments for future course of action.
- ♣ Evaluate and record the effects of all control techniques used.
- ♣ Pesticide application records shall be kept as required by the NJDEP pesticide control regulations.

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