NJ Department of Environmental Protection

Integrated Pest Management (IPM) Prerequisites And Minimum Criteria for Lawn and Landscape

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 an IPM Program:

Education of the Customer

The IPM practitioner will educate the customer about the principles of IPM as well as the public health and environmental advantages of judicious pesticide use. 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. The information for educational purposes will also include the importance of monitoring for pest problems, pests, soil condition (reflected in available soil moisture and fertility) plant siting, selection, beneficial insects and maintaining plant vigor to resist diseases and insect damage.

Customer Involvement

The practitioner should emphasize the importance of customer involvement with the process of IPM. Examples of areas where the customer can actively participate are: Providing water (irrigation) to specific areas at the frequency and volume requested by the IPM manager, proper mowing, and notifying the IPM practitioner at first notice of any plant abnormality (off-color, missing leaves/branches, wilting, etc.)

Credentials of the IPM Practitioner

The IPM practitioner should have the following credentials:

- ♣ Completion of the Rutgers Landscape IPM Short Course or other course, comparable in scope and duration
- ♣ A valid Commercial Pesticide Applicator license issued by the NJDEP
- ♣ Certification in Category 3A (Ornamentals Pest Control), or 3B (Turf Pest Control), whichever is appropriate

Minimum Criteria for IPM:

Monitoring

- An initial site inspection should be performed which will produce a written plant inventory and/or map of current turf, woody and herbaceous plant materials on site and their condition. Key plants, key pests, and key locations should be identified and delineated.
- An initial soil sample(s) should be taken at an appropriate location(s) on the property. The results should be analyzed and interpreted by a laboratory to establish a university/research-based schedule for fertilizer, lime, and soil amendments based on specific site conditions, plant material and management goals. Soil samples should be analyzed on a rotating basis at least once every three years.
- Minimum of five monitoring service calls should be scheduled over the year. Each service call shall include a visual inspection of key plants, as well as predicted pest activity for that period. Additional service calls should be made at the request of the customer if problems develop between intervals. Monitoring should include a record of plant stress and/or environmental concerns, beneficial insect status, as well as pest levels and actions taken.

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. 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:

- Cultural methods, such as water and nutrient management to improve landscape quality.
- Physical and mechanical controls, such as handpicking, minor hand pruning/trimming, hand weeding and mulching, or the use of collars to prevent hatching larvae from burrowing into the soil surrounding plants. These approaches, as well as the removal of leaves generated by isolated cases of leaf drop, should be performed at each service call if warranted by conditions. This should prevent certain diseases from increasing in severity.
- Biological controls, when and where appropriate, such as bacteria, fungi, viruses and nematodes that are predators or parasites of plant pests;
- Mulching areas of the property that were delineated based on site inspections. Weed control fabric will be used only with inorganic mulch. It is recommended that all curb, roadway, and bed line edges be trenched to help contain the mulch if feasible by design and construction and without injury to the roots of desired vegetation.

If any insect, disease, or weed problems develop which meet or exceed the pre-determined action threshold, and pesticide use becomes 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 should 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 should 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.

- ♣ A written summary of each visit will be kept and also provided to the client, to include any cultural procedures, pests, diseases, or other problems found, control measures, or treatments made, and materials used, as well as recommendations for water or care.
- ♣ The IPM practitioner will keep records of all monitoring observations.
- ♣ Pesticide application records shall be kept as required by the NJDEP pesticide control regulations.

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