NJ Department of Environmental Protection

Integrated Pest Management (IPM) Prerequisites and Minimum Criteria for Utility 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

Field personnel advising or performing vegetation management on utility rights-of-way should receive training on proper vegetation techniques and procedures, and understand the philosophy of IPM. They should be educated on the various pest management techniques that can minimize 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. Education and training is available through the Utility Arborist Association, Edison Electric Institute, regional and state vegetation management associations, state pesticide recertification training, university and extension training, pesticide manufacturers and industry peers, and at internet websites.

Credentials of the IPM Practitioner

The IPM practitioner should have the following credentials:

- ♣ Have viewed the Edison Electric Institute Environmental Stewardship Strategy for Electric Utility Rights-of-Way videotape and supporting documents
- ♣ A valid Commercial Pesticide Applicator license issued by the NJDEP
- ♣ Certification in Category 6B (Right-of-Way Pest Control)

Minimum Criteria for IPM:

Monitoring

Vegetation management should be conducted on a prescription basis by inspection of the right-of-way sites prior to the treatment. A post treatment inspection should also be performed to check the treatment's efficacy. A person trained in plant identification can conduct these inspections from the ground or through aerial patrols. New Board of Public Utilities regulations call for inspection and maintenance, if necessary, of electric rights-of-way, at least once every four years. A well run IPM program can easily be adapted to this schedule. For utility rights-of-way, it is not necessary to monitor on a more frequent basis because pest problems consist mostly of unwanted trees and vines. Since trees do not become a threat overnight, utility vegetation managers have some leeway in timing their inspections.
The proper management tool(s) should be chosen based on:

- ♣ vegetation conditions (species, density and height)
- ♣ facilities involved
- ♣ terrain
- ♣ accessibility
- ♣ adjacent land uses
- ♣ environmental conditions (soil types, wetlands, riparian areas)
- ♣ sensitivity (rare plant species, aesthetics)
- ♣ weather conditions and season

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.

Threshold levels that trigger vegetation management control will vary based on the conditions found during inspection and their relative impact on safety and reliability of the utility service. Control needs may vary from one geographic section of a right-of-way to another, and the area within a right-of-way section (wire or border zone).

General Vegetation Management Methods

The goals of a vegetation management program are to provide for public and worker safety and to provide access and reliability of service. These goals are obtained by managing right-of-way plant communities to convert from predominately tall growing plant species, to communities dominated by low growing plant species. This can be accomplished by controlling tall growing

plant species while encouraging or preserving compatible low growing grasses, herbs and shrub species. With proper selective management, the low growing vegetation can eventually dominate the right-of-way and inhibit the tall growing vegetation, thus providing cultural and biological control of the incompatible species and reducing the need for future treatments.

Pest Management Methods

Integrated Pest Management techniques will be used for prevention and suppression of pests. These include but are not limited to:

- ♣ Manual and mechanical cutting, where wood debris can be used as windrows, or chipped and left on site to enrich the soil.
- ♣ Cultural methods, where desirable vegetation is given the ability to thrive and out-compete unwanted tree species for sunlight, nutrients and water.
- ♣ Sanitation, by removal of trash and garbage along the right-of-way to manage insect and rodent populations should be considered, if and when appropriate.
- ♣ Biological methods, where desirable low growing plants and animals suppress the growth of unwanted trees through their respective use of competition, allelopathy and seed consumption.
- ♣ Alternative methods of weed destruction such as the use of controlled burning where safety, permission and economics are adequately addressed.
- ♣ Chemical herbicide for the treatment of incompatible tall growing trees and vines to stop their growth and remove them from the right-of-way.

Power plants and substations, due to their proximity to high voltage, must be kept clear of vegetation near energized facilities. This is accomplished through the application of pre-emergent herbicides each spring before the growing season, and touched up with post emergent herbicides later in the year if and where necessary. Because of the extreme safety hazards and regulations, vegetation cannot be tolerated on these sites, so thresholds are inappropriate. As a result, these areas are covered with gravel and kept clear of weeds.

When the pest level meets or exceeds the pre-determined threshold 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 if and where available, 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 should allow each applicator to note the problems associated with each site. In addition, the principles of an IPM program should be written into any contracts for this work.
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.

- ♣ Records of inspection and treatment shall be maintained noting the vegetation conditions, the control technique(s) used and related comments.
- ♣ 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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