Model Integrated Pest Management Plan For Connecticut State Agencies

Arborist (Tree Care)

State of Connecticut
Department of Energy and Environmental Protection
Pesticide Management Program
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The Department of Energy and Environmental Protection (DEEP) has developed this model plan with the assistance of the Connecticut Tree Protection Association and the Connecticut Agricultural Experiment Station in order to aid in the development of comprehensive integrated pest management programs at state departments, agencies and institutions as outlined in Connecticut General Statutes Section 22a-66l. Integrated Pest Management (IPM) is defined as the use of all available pest control techniques including judicious use of pesticides, when warranted, to maintain a pest population at or below an acceptable level, while decreasing the unnecessary use of pesticides.

A primary goal of IPM in arboriculture is to reduce the amounts of pesticides applied by using alternative methods of pest control which may include the promotion of tree health, the use of insect and disease resistant trees, sanitation, and mechanical or biological control. These methods will help to eliminate conditions that are favorable to pest infestation, making their survival more difficult.

Please consult with your landscape pest control provider, Connecticut Agricultural Experiment Station or the DEEP Pesticide Management Program for technical assistance if needed.

Section 22a-66l of the Connecticut General Statutes states:

(a) Each state department, agency or institution shall use integrated pest management at facilities under its control if the Commissioner of Environmental Protection has provided model pest control management plans pertinent to such facilities.

(b) Each state agency which enters into a contract for services for pest control and pesticide application may revise and maintain its bidding procedures to require contractors to supply integrated pest management services.

(c) The Commissioner of Environmental protection shall annually review a sampling of state department, agency or institution pest control management plans required by regulations adopted under section (e) of this section and may review any application of pesticides to determine whether a state department agency, or institution acted in accordance with subsection (a) of this section.

(d) The Commissioner of Environmental Protection may provide model pest control management plans which incorporate integrated pest management for each appropriate category of commercial pesticide certification which it offers. The commissioner shall, within available resources, notify municipalities, school boards, and other political subdivisions of the state of the availability of the model plans for their use. The Commissioner of Environmental Protection shall consult with any state agency head in the development of any such plan for properties in the custody or control of such agency head.

(e) The Commissioner of Environmental Protection, in consultation with the Commissioner of Public Health, shall adopt regulations in accordance with the provisions of chapter 54 establishing requirements for the application of pesticides by any state department, agency or institution. Such regulation shall include provisions for integrated pest management methods to reduce the amount of pesticides used. Notwithstanding the provisions of this section and any regulations adopted under this section, a pesticide may be applied if the Commissioner of Public Health determines there is a public health emergency or the Commissioner of Environmental Protection determines that such application is necessary for control of mosquitoes.

(f) The Commissioner of Environmental Protection shall develop and implement a program to inform the public of the principles of integrated pest management and to encourage its application in private properties.

***Note:* Not all tree care and maintenance practices are addressed in this model. A licensed arborist should be consulted for recommendations regarding pruning, hazard management, cabling, bracing and treatment of wounds. This model is intended to serve only as a guide for the development of an IPM plan for pest control and the use of pesticides as outlined in CGS Section 22a-66l and RCSA 22a-66l-1.**

Sample Integrated Pest Management Plan For
Connecticut State Agencies
Arborist Program

Facility Name
Address
Telephone Number

Trees located on the grounds of *Facility Name* will be inspected by *name of the arborist/pest control company (LCO)* for the purpose of identifying areas of pest infestation (insect & disease). Recommendations will be made for corrective measures, and a comprehensive integrated pest management (IPM) plan will be developed. The IPM plan will utilize all methods of pest control including modifying cultural practices, monitoring for pest populations, mechanical and biological control and the judicious use of pesticides. If possible, pesticides will not be applied on a routine basis, however, they may be used as a tool to maintain pest populations at or below an acceptable level while maintaining plant health and aesthetic quality. The selection of pesticides that may be used will be based on a pre-determined hierarchy that will utilize least toxic products as first choice. Whenever practicable, biological controls such as predatory insects, beneficial nematodes or microbial pesticides will be used. Proper implementation of this program may reduce the volume, toxicity and frequency of application of pesticides and other chemicals, thereby reducing negative environmental impact and the risk of potential exposure of building occupants and visitors to the grounds.

The LCO and *name of responsible individual - Contracting Officers Representative (COR)* shall meet to discuss areas that have been problematic or sensitive. (e.g.; wet, shady and/or high traffic areas or areas where there is a history of high pest pressure) Areas that are sensitive to pesticide use will also be discussed. (e.g.; daycare areas, elderly residence, work area of sensitive employees, etc.)

Once these locations have been identified, the LCO and COR will discuss various pest control options and determine the speed of control necessary as well as threshold/action levels based on pest population, species, plant health and aesthetic considerations.

Name of LCO will submit recommendations for corrective measures in writing to *Name of (COR)* specifying action that should be taken by the facility (e.g.; correct drainage/runoff problems) prior to the application of any pesticides. *He/she* is responsible for scheduling and coordinating maintenance activities at the facility and will act on the recommendations as soon as possible. *He/she* will report in writing on which recommendations will not be followed and state the reasons if no action is to be taken as required by Connecticut State Regulations Section 22a-66l-1(c). The written report will be kept on file at the facility along with this plan. Otherwise, all IPM methods that are recommended will be followed.

Pest control services will be supervised by *name & certification number*, and performed

by *name(s) & certification number(s)* of *name of arborist/pest control company & business registration number*. The IPM program will begin on *date*. The frequency of visual inspections will be determined by the Growing Degree Days, tree species on site and the likelihood that pest problems will occur. Service calls will be performed at least once a month during peak periods (March-September). Service calls will be scheduled on *day of week & approx. time* and involve a visual inspection of all significant landscape trees and potential problem areas. Monitoring devices will be used when appropriate and pesticide application will be made where pest populations exceed threshold levels. An inspection record will be completed at the conclusion of each service call. These written recommendations will include corrective measures that need to be implemented by building maintenance personnel.

Name of licensed arborist will monitor/scout the grounds of the facility at least once a month from March through September. Additional monitoring may be required during peak periods (June-August) to monitor for pests (insect/disease). Off-season (October-March) monitoring may also be scheduled on an as needed basis.

All pest problem areas and written recommendations will be recorded on "***Arborist Pesticide Application Record /Monitoring Report"*** forms or substantially similar substitute. These forms will be kept in a file that will be maintained in *responsible individual(COR)* office. Additional records maintained in this file will include a copy of this plan, reports on IPM options not implemented as required by CSR Section 22a-66l-l(c), copies of all soil sample analysis reports, a diagram indicating the placement of all pest monitoring devices and copies of the pesticide product label information provided at the time of contract by the LCO. *He/she (COR)* will act as a liaison between the arborist/pest control company and department supervisor(s) and will be responsible for notifying the appropriate personnel of corrective actions that are needed (e.g.; correct drainage and/or runoff problems).

****The licensed arborist shall conduct an inspection to confirm the presence of the pest(s) and verify damage level estimates prior to* ***any widespread application*** *of pesticide. If the pest control operator has identified insect and/or disease infestation during a previous scouting.****

Pest sighting report logs provided by *name of LCO* will be reviewed by the pest control operator at the beginning of each service call. The log will be maintained in *responsible individual (COR)* office and will serve as a tool to facilitate communication between all personnel and the pest control operator. *All* pest sightings should be reported in the logs and should include specific information as to the location and type of pest, if known. Whenever possible, a sample will be provided to the arborist/pest control operator for identification purposes.

Arboriculture Practices

Best management practices will be followed for the care and management of all formal landscaping. Soil conditions will be assessed annually to identify such potentially damaging occurrences as soil compaction, trenching or digging in the vicinity of the

tree, soil contamination or the burial of root zones. In situations where it is suspected that the tree may be suffering from nutritional problems, soil, foliar and/or irrigation water samples may be collected for analysis of nutrient/micronutrient levels, pH and salinity. Soil will be collected as a composite sample(s) from the estimated root zone depth of the affected tree(s). Steps will be taken to correct conditions that are suspected or have been identified to be the cause of the trees decline whenever possible.

As trees under stress become more susceptible to insect and disease problems, recommendations may be made for the removal and replacement of the affected tree. The licensed arborist will suggest appropriate replacement varieties with consideration given to specific site conditions, insect and disease resistance and the degree of maintenance typically associated with a particular tree species.

At the time of planting new or replacement trees, the licensed arborist or pest control operator will visually inspect trees for insect and disease infestation, viable root system and good branching habit prior to planting. Trees found to have any defect, or are substandard according to accepted nursery standards, will be rejected in an effort to eliminate damage on a large scale. Trees will be planted at the proper depth into soil that has been appropriately prepared to ensure survival and avoid plant stress.

New trees that are to be planted may be treated with mycorrhizal fungi, particularly if they are to be planted into previously unforested areas or have been grown in sterilized soil. Incorporation of mycorrhizal fungi will help to produce a vigorous plant by improving nutrient uptake and water absorption and increasing drought resistance.

Newly planted trees may be staked to protect the tree from mowing equipment, vehicles and/or vandals. Staking may also be done to anchor the root ball or where local conditions such as strong or prevailing winds encourage the support of trees as a precautionary technique. On each service call, the pest control operator will inspect the staked tree for any damage, broken ties, ties that are girdling the trunk and whether the stakes should be removed. Support ties will be removed from staked trees within one year of planting. ***(Staking should be done according to accepted arboriculture practices.)***

Use of protective wrap on newly planted trees may be considered to prevent sunscald and/or frost cracks and conserve bark moisture. Protective wrap will be used only after careful consideration has been given to specific site and microclimate conditions, the season of year and tree species. Whenever possible, biodegradable or photodegradable materials will be used. As with staking, the pest control operator will inspect the wrapped tree for girdling and bark constriction. In all cases, the tree wrap will be removed within one year of installation.

The pest control operator will observe the grounds and tree condition for moisture content during regular service calls, paying particular attention to newly planted and young trees. Trees will be watered as needed to ensure their survival.

Mulch materials should be placed around the base of trees at sufficient depth to reduce weed growth and help to retain moisture. A mulch barrier will also provide a buffer area

to eliminate mechanical damage from string trimmers or mechanical edgers. Bark mulch can be placed at a depth no greater than 2-3" and tapered to a shallow depth around the base of the tree. In no case shall mulch be placed high on the trunk of the tree. Black plastic mulch should not be used.

During routine service calls the pest control operator will inspect the trees for dead and dying branches or vegetation and report to the licensed arborist. Any pruning will be prescribed by the licensed arborist. Appropriate arboricultural methods for the pruning of trees will be used where the removal of vegetation is required. Branches and plant material will be properly disposed of on the day that work has been performed.

Where trees are located in close proximity to buildings, leaves will be raked away from the base of the tree to prevent accumulation, decrease the potential for disease and development of rodent harborage.

*****Reminder: Be sure to review/discuss site specific plans for pruning, hazard management, cabling, bracing and treatment of wounds.***

Insect Control

The timing and frequency of visual inspections will be determined by the Growing Degree Days, tree species on site and the likelihood that pest problems will arise. Visual inspections will also be conducted during routine maintenance activities. Pest monitoring traps (pheromone, sticky, etc.) will be utilized, where appropriate, to indicate the presence of harmful pests. Wherever pest activity is found and if practicable, infested branches may be removed and properly disposed of.

In an effort to preserve beneficial and predatory insects, pesticides will be applied as needed. Pesticide application may be considered if harmful pests have been identified and it is anticipated that the activity will result in unacceptable levels of injury or damage to trees. For this facility, up to **15%** discoloration, defoliation or damage to the total leaf area will be considered acceptable.

The 15% aesthetic injury level should be determined by a system of expert ranking where the licensed arborist utilizes their professional experience to estimate the aesthetic injury that can be expected based upon the species and densities of pests found during scouting.

Pesticide application will be limited only to the infested tree(s). General applications of pesticides will not be done. Bio-insecticides, insecticidal soaps or horticultural oil will be utilized if possible. The timing of each application will be based on whether the pest is present and causing damage, and the stage in the pest life cycle where that pest is most vulnerable to control by pesticides.

Preventive pesticide applications may be performed only to areas where the previous or current year's monitoring has indicated the presence of harmful insect pests or if certain tree species, prone to specific insect problems, are present. Preventive applications should be made only to specific problem areas.

Weed Control

Consideration should be given to the potential harmful effects that herbicide applications to turf and ornamental areas may have on trees. Also, use of volatile herbicides or herbicides that are prone to leaching should not be used in any area.

Disease Management
Pesticide applications for control of diseases will be performed if evidence of disease has been found, a significant degree of discoloration, defoliation or damage **(15% or greater of the total leaf area)** can be anticipated and all proper cultural practices have been employed.

The 15% aesthetic injury level should be determined by a system of expert ranking where the licenced arborist utilizes their professional experience to estimate the aesthetic injury that can be expected based upon the species and densities of pests found during scouting.

Preventive pesticide applications may only be performed when the previous or current year's monitoring has indicated a likelihood of disease or if certain tree species, prone to disease problems, are present. Preventive applications should be made only to specific problem areas.

Name of licensed Arborist will discuss pest control options with *Name of COR* to determine the appropriate course of action.

****Pesticide applications will be performed after regular business hours or on the weekend when the grounds of the facility are not in use.****

Pesticide Plan
Pesticides may be applied if pest populations exceed threshold levels. Applications will be performed *after regular business hours or on the weekend* when the grounds of the facility are not in use. Priority is given to those pesticides having the lowest toxicity, taking into consideration the method and frequency of application and the risk of exposure to persons in the area. Whenever practicable, biological pest control such as predatory insects, beneficial nematodes or microbial pesticides will be utilized. Pesticides selected for possible use are as follows;

First Choice *(Products having the lowest toxicity and/or least risk of exposure based on the formulation, method and frequency of application.)*

Insecticides

a)
b)
c)

Second Choice *(Products having moderate toxicity and/or risk of exposure based on the formulation, method and frequency of application.)*

Insecticides

a)
b)

c)

Third Choice *(Products having moderate to high toxicity and/or risk of exposure based on the formulation, method and frequency of application.)*

Use of any third choice pesticide product requires written approval of COR prior to application

Insecticides
a)
b)
Fungicides
a)
b)

An appraisal of this IPM program will be conducted quarterly by *responsible individual (COR)* and *name of certified supervisor*. A determination will be made as to the effectiveness of the program and revisions will be made to correct potential problems.

An evaluation of the potential to contaminate water will be made. Maps will be copied from the "Atlas of the Public Water Supply Sources and Drainage Basins of Connecticut" which identify the location of any public water supply, watershed or wellfield and will be attached to this plan as required by CSR Section 22a-66l-1(6)(F).

04/25/00

Reference List

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