Integrated Pest Management Plan For South Windsor Public Schools Ornamental & Turf

Prepared by
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Superintendent of Parks

Dr. Kate Carter.
Superintendent of Schools

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1.0 PURPOSE

To sustain the Schools listed in Attachment A grounds in a socially acceptable, environmentally responsible, and economically practical system which utilizes all suitable control strategies, cultural, biological, and chemical to keep pest damage below established and evolving thresholds such that chemical pesticides are used responsibly, efficiently, with the goal of ultimately reducing or eliminating their need.

2.0 SCOPE

This plan applies to the grounds and athletic fields located in Attachment A, South Windsor Schools will be inspected by the South Windsor Parks and Recreation Dept Commercial Supervisor, David Turkington, pesticide application license PMCS-0065201,hereby(Supervisor)for the purpose of identifying areas of pest infestation (weed, insect & disease) on town owned property, making recommendations for corrective measures that should be implemented and developing a comprehensive integrated pest management (“IPM”) plan.

3.0 RESPONSIBLE PARTY

The South Windsor School’s natural grass athletic fields, synthetic turf surfaces, gardens and green spaces)will be inspected by the Department of Parks and Recreation Park Commercial Supervisors, David A. Turkington, pesticide application license PMCS-0065201, hereby(Supervisor) to identify areas of pest infestation (weed, insect & disease) on town-owned property, making recommendations for corrective measures that should be implemented and developing a comprehensive integrated pest management (“IPM”) plan.

4.0 IPM METHODOLOGY

The IPM plan will utilize all methods of pest control which may include modifying cultural practices, monitoring for pest populations, mechanical and biological control, and the judicious use of pesticides.

If possible, pesticides will not be applied; 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 predetermined

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 will 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 who may be sensitive to their use.

Procedure to be used for pest control include:

- Maintain the site history.
- Identification of the source of any problem
- Soil samples will be collected by the Supervisors and analyzed.
- Identify the pest problem and what is the cause (i.e., disease, insect, weed)
- Determination of the tolerance level for pest
- Regular Scouting
- Determination of what other means are available other than pesticides to address the problem.
- Identification and implementation of cultural techniques to manage pest problems.
- Select the proper tactic, cultural, biological, or chemical in accordance with state law.
- Evaluate the control measure used.

In accordance with Chapter 170 section 10-231 State Statutes as noted in the IPM plan pesticides may need to be used as a tool to maintain pest/animal populations at or below an acceptable level while maintaining plant aesthetic quality. The selection of these pesticides that may be used will be based on a predetermined hierarchy that will utilize volume, effectiveness, and duration which would have the least impactful pesticide as first option. Whenever practicable, biological controls such as predatory insects, beneficial nematodes or microbial will be used.

> "Lawn care pesticide" means a pesticide registered by the United States Environmental Protection Agency and labeled pursuant to federal Insecticide, Fungicide and Rodenticide Act for use in lawn, garden and ornamental sties or areas. "Lawn care pesticide" does not include (A) a microbial pesticide or biochemical pesticide that is registered with the United States Environmental Protection Agency, (B) a horticultural soap or oil that is registered with the United States Environmental Protection Agency and does not contain any synthetic pesticide or synergist, or (C) a pesticide classified by the United States Environmental Protection Agency as an exempt material pursuant to 40 CFR152.25, as amended from time to time.

Proper implementation of this program will reduce toxicity and frequency of application of permitted pesticides and other chemicals, thereby reducing negative environmental impact and risk of potential exposure of the user to the grounds who may be sensitive to use. Only permitted pesticides for turf/ornamental shall be used in accordance with State Statute.

5.0 EFFECTIVE DATES

Pest control services will be performed by the Parks and Recreation Department Supervisor. Operations will be scheduled weekdays and weekends and involve a visual inspection of potential problem areas, with the assistance of monitoring devices where appropriate and application of pesticides where pest populations exceed threshold levels. Records will be completed at the conclusion of each application and will include written recommendations of corrective measures that need to be made by grounds personnel.

Subsequent visits will be performed monthly or as needed depending upon pest pressure. Service calls will be scheduled each month and involve a visual inspection of potential problem areas, with the assistance of monitoring devices where appropriate and application of pesticides where pest populations exceed threshold levels. Records will be completed at the conclusion of each visit and will include written recommendations of corrective measures that need to be made by school system.

The Supervisors will utilize growing degree days, monitoring ground temperature, and notification from universities and co-op extension centers or similar agencies to develop a pest management strategy.

The Supervisors will monitor/scout the grounds of the facility April through November. Additional monitoring may be required during peak periods (May-September) to monitor for weeds and diseases. Off-season (November-March) monitoring may also be scheduled on an as needed basis.

6.0 RECORD KEEPING

Site assessment forms provided by the supervisors shall be held for 5 years. The forms will be maintained in high School office, Superintendent’s office and the Parks and Recreation office and will serve as a tool to facilitate communication between all personnel and the landscape/pest control technician. 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 practical, a sample will be provided to UMASS, UConn, or Connecticut Experiment Station or other certified labs.

The Supervisors will submit recommendations for corrective measures in writing to the Superintendent of Schools specifying action that should be taken by the facility (e.g., correct drainage/runoff problems). The Parks and Recreation Department is responsible for scheduling and coordinating maintenance activities at the facility and will act on the recommendations as soon as possible. The Supervisor will report in writing which recommendations will be followed and state the reasons if no action is to be taken as required by CSR Sec.22a-66l-1(c). Otherwise, all IPM methods that are recommended will be followed.

All pest problem areas and written recommendations for structural, sanitary, or procedural modifications will be recorded on "Site Assessment Form” or substantially similar substitute. The forms will be kept in a file that will be maintained in the school

office and the Superintendent's office. Additional records, that will be maintained in this file will include a copy of this plan, copies of all soil sample analysis reports, a diagram indicating the placement of all pest monitoring devices.

The supervisor and the school system and will be responsible for notifying the appropriate personnel of corrective actions that are needed (e.g., correct drainage and/or runoff problems).

6.1 Annual Notifications and Review

The plan shall be reviewed and updated, if necessary, annually. Notifications identifying the IPM plan and the procedure for electronic notifications of applications shall be sent annually. A notice detailing all applications, including the product, active ingredient, target pest, location of application, area of application, date of application, and a contact person shall be sent annually. Products shall be reviewed and updated. 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 well field and will be attached to this plan as required by CSR Section 22a-66l-1(6)(F).

7.0 EMERGENCY APPLICATIONS

> Applications of pesticides may be allowed by someone who has a DEEP Commercial Supervisor License, to eliminate a threat to human health as determined by; local health director, commissioner of public health, commissioner of environmental protection, or for public schools, ***Dr. Kate Carter*****, Superintendent** ***of Schools, South Windsor, CT School District, (hereby Superintendent).***

Superintendents, local health directors and pest control professionals will use "Guidance on Determination of Threats to Human Health, Allowing Application of Lawn Care Pesticides at Schools" ("Laws" section in binder) developed by the Department of Environmental Protection and Department of Public Health regarding the determination and treatment of health threats. IPM approach will be followed as outline above.

7.1 OVERALL PLAN FOR EMERGENCY APPLICATIONS

The pests listed on the guidance documents are the most common ones for which a decision will likely need to be made. Nuisance pests, such as biting flies or mosquitoes in the absence of indications they are carrying disease, are not considered a threat to human health sufficient to justify control with lawn care pesticides Integrated pest management (IPM) recommendations are also made for each pest, which should reduce the amount of pesticide used and increased the effectiveness of an application, if needed.

The selection of permitted, per State Statutes, pesticides that may be used will be based on a predetermined 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 will 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 who may be sensitive to their use.

The Supervisors will meet with the Superintendent or their designee to discuss areas that have been problematic. (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, work area of sensitive employees, environmentally sensitive areas, etc.)

Once these areas have been identified, the Supervisor and the Superintendent or their designee shall 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.

Pest control services will be recommended by the Supervisor. All applications of pesticides must be done under the direction of someone who has a DEEP Commercial Supervisor License.

(Note all pesticides in Appendix B only be applied by someone who has a DEEP License in Mosquito and Biting Fly Pest license). The visits will be between Sunrise to Sunset Sunday through Saturday.

*****The Supervisor shall conduct a follow up inspection to confirm the presence of the pest(s) and verify damage level prior to any widespread application of Permitted Pesticide. *******

The supervisor is responsible for scheduling and coordinating maintenance activities on town grounds and will act as soon as possible. The Supervisor will state in writing which recommendations will not be followed and state the reasons if no action is to be taken as required by CSR Sec. 22a-661-1(c). Otherwise, all IPM methods that are recommended will be followed.

8.0 TURF PLAN

Best management practices will be implemented at all times in an effort to maintain turf health and appearance. Turf should be mowed to a 2" to 3" height or as high as possible 2 to 3 times a week (During the season, Athletic Fields will be mowed at the sport specific height.) Mowing should be done when the grass is dry to avoid spread of turf diseases. Mower blades should be maintained with sharp cutting edges to avoid excessive wounding and stress of the turf grass.

8.01 Soil Testing

Upon implementation of the IPM program and prior to the application of any fertilizer or pesticides, soil samples will be collected by the turf manager and sent to certified labs for analysis. Soil samples will also be collected and analyzed annually to assess soil fertility and pH. Annual sampling will be performed in late fall and/or early spring after the frost has left the ground. Amendments will be made to the soil as recommended by

the analysis reports. Proper soil pH and fertility will help to prevent many turf grass diseases and promote plant vigor, thereby reducing the occurrence of insect and weed invasion.

8.02 Fertilization
When practicable, fertilizer with 25% or higher slow-release nitrogen shall be utilized when feasible. Fertilizer should be applied no later than October 30th. Late fall applications of lime will be avoided, if possible, to reduce the risk of snow mold. Over-fertilization may result in an increase of some plant diseases, more frequent mowing, increased thatch layer and risk of leachate into groundwater in some circumstances. Fertilizer applications should be performed when grasses are actively growing. Fertilizer applications will not exceed 5 pounds of nitrogen per 1000 square feet per year unless soil sample analysis reports indicate a necessity to further amend the soil. Fertilizer may exceed 5 pounds of nitrogen per 100 square feet during repair, renovation, or turf establishment.

According to CT law fertilizer containing phosphate or phosphorous shall not be applied to an established turf area unless a soil test, performed in the last 180 days, indicates a deficiency, or the phosphorous containing fertilizer is applied for the establishment of new grass or the repair of turf with seed or sod. Fertilizer containing phosphorous is allowed during overseeding. This law does not apply to organic law fertilizers derived from plant or animal products that contain naturally occurring phosphorous. Fertilizers shall not be applied from November 15 to March 15 and shall not be applied within 20 feet of a water body.

8.03 Best Practices
All turf management activities, including fertilizer use, chemical use, and cultural actions should comply with the “best practices” published by the New England Sports Turf Managers Association.

8.04 Clippings
Proper management of grass clippings is an important part of maintaining the lawn. Grass clippings will remain on the lawn and allowed to degrade, returning 25% of available nitrogen back to the lawn. This will help to increase the soil organic matter and promote beneficial earthworm activity.

8.05 Irrigation
Watering may be done as needed to a volume of 1” per acre per week. Watering in the evening is not recommended on hot, humid nights because it may increase the occurrence of diseases. Diseases may be prevented by keeping the upper soil layers moist.

8.06 Thatch
A thatch layer up to ½ inches thick is beneficial. An excessive layer is undesirable because it will block moisture, fertilizers and/or pesticides from reaching the root zone of the turf. Over-development of thatch can be prevented by reducing fertilizer applications and maintaining proper soil pH. If de-thatching is necessary, it will be done mechanically

during the spring or late summer (September) when grasses are actively growing and can recover faster. Aeration will also be done to avoid compaction.

8.07 Seed
Seed selection utilized NTEP results should provide a mixture of a variety of grass species and blends, which would have a variety of drought, insect, and wear tolerance. The highest quality seed should be selected with careful attention paid to the germination rate (no less than 80%), the percentage of pure seed (no less than 98%) , and the percentage of weed seed (less than 0.2%). The seed should be developed for its intended use. Seed specifically bred for use on sports fields, or ornamental lawns, or naturalized areas.

8.1 TURF INSECTS

Visual inspection of the turf areas will be done daily, April through September, by the certified supervisor to monitor for evidence of chinch bug, sod webworm, billbug and/or other destructive turf pests. Additional sampling may be performed to confirm the presence of these pests and/or White Grubs.

Applications of insecticide to turf areas will be limited to preserve populations of beneficial insects and nematodes. Pesticide application will be considered if monitoring indicates the following pest populations or up to 20% damage can be anticipated.

1. White Grubs: 8-10 larvae/square foot.
2. Chinch Bug: 30-50 Nymphs & adults/square foot or when damage is evident.
3. Sod Webworms/Cutworms: Areas will be treated only when damage is evident.
4. Hyperodes weevil (annual bluegrass weevil): Areas will be treated only when damage is evident.
5. Black turfgrass ataenius: Areas will be treated only when damage is evident.
6. Ticks: Areas will be treated when safety is a concern based on the number of users, the use of the area, the environmental conditions, any population detected or reported. All applications will follow the state statue

8.2 WEED CONTROL

A lawn area that is properly managed should produce dense, thick turf grass, which ideally will help to prevent invasive weed species from getting established. Some weed growth should be anticipated and be tolerated to some degree. A lawn area that is properly managed should produce dense, thick turf-grass, which ideally will help to prevent weed species from getting established. Some weed growth should be anticipated and tolerated to some degree. Threshold shall be 10-15% of turf.

Over seeding at a rate of 3-12 lbs. per 1000. Seed selected will be taken from\ tested varieties. Soil Amendments and pesticides permitted per State Statute will be used in weed management, as well as, manual pulling, propane, steam or freezing. In addition, these products list may be applied as a spot application to control invasive annual and

bi-annual grasses and broad leaf weeds as deemed necessary.

A complete re-evaluation of any area will be performed by the Supervisor to assess and re-implement proper cultural practices to maintain turf density and vigor.

Over-seeding the area throughout the year with improved turf grass and raising the mower height during the growing season will help to prevent crabgrass encroachment.

A complete re-evaluation of any area by the Supervisor to assess and re-implement proper cultural practices to maintain turf density and vigor. Seed selection utilized NTEP results should provide a mixture of a variety of grass species and each mixture would have a variety of blends which would have a variety of drought, insect and wear tolerant.

8.3 DISEASE MANAGEMENT

Pesticide applications for control of turf diseases will be performed only if evidence of disease has been found and significant areas (10-15% of the total turf area) of permanent damage can be anticipated and all proper cultural practices have been employed. If the site has a history of disease outbreak a preventative application can be made if the growing degree days, the environmental conditions, and site observations indicated an imminent threat. A preventative application uses far less control agent than a curative application. The Supervisor will review and determine the best pest control options and the best appropriate course of action.

9.0 FLOWER BEDS AND FORMAL LANDSCAPING

Best management practices will also be followed for the care and management of all flowerbeds and ornamental plantings. Insect and disease resistant plant varieties will be selected for planting in any flowerbeds and/or formal landscaping areas whenever possible. The landscape/pest control technician will visually inspect plants for insect and/or disease infestation prior to planting. Plants found to have any infestation will be rejected in an effort to eliminate damage on a large scale. Plants will be planted at the proper depth to avoid plant stress. Mulch will be placed in all garden areas and around individual trees and shrubs. Mulch materials will be placed at sufficient depth to reduce weed growth and help to retain moisture. Mulch placement will also be placed to provide a buffer area to eliminate mechanical damage that may result from use of string trimmers or mechanical edgers. Foundation plantings and vines will be trimmed at least 12" away from the building to eliminate rodent harborage and access to the building and allow for monitoring of rodent activity. The landscape/pest control technician will remove and dispose of dead and dying vegetation from plants and plant beds (monthly) to prevent spread of disease. Leaves will also be raked away to prevent accumulation and development of rodent harborage. Branches and plant material will be properly disposed of at the end of each day that work has been performed.

10.0 PESTICIDE PLAN

Pesticides may be applied if pest populations exceed an acceptable level. 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 building occupants. Whenever practicable, biological pest control such as predatory insects, beneficial nematodes or microbial pesticides will be utilized. Pesticides include herbicide, miticide, insecticide, fungicide, biological controls, 25b applications, and plant disease control chemicals. **Rodenticides and Indoor pests are covered under a separate IPM.**

10.1 Outsourced Applicators.
Some services may be outsourced to a licensed pesticide applicator. These companies are licensed to implement programs which are consistent with the model pest control management plan developed by the Commissioner of Energy & Environmental Protection. The objectives of this IPM Plan is to utilize all methods of pest control including structural maintenance, sanitations and, if necessary, the judicious use of pesticides if pest populations exceed an acceptable level.

10.2 Timing of Applications
Application of pesticides will not be made during regular school hours or during planned activities with the exception of emergency applications. An emergency application would be necessary when there is a need to eliminate an immediate threat to human health. The school administration will determine what is used and the method of notification for an emergency application.

10.3 Posting and Notifications.
All persons who registered for prior notice of pesticide applications must be notified 24 hours prior to the application. This notice must include the date of the application, the active ingredient, the location and area of the application, and the person to contact for more information. This information will also be posted electronically on the school website and any social media used by the school. All state codes for posting notifications must be followed.

Yellow posting signs must be used for all pesticide applications, including minimum risk pesticides allowed for use on school properties. They must be posted at points of entry to the property and every 150 feet of public road frontage. Notice of pesticide applications must also be posted on all social media that is in use by the school (i.e., Twitter, Facebook). Postings should include the duration of time that must elapse before the area can be entered by students and staff. (The exclusion time.) Yellow posting signs shall remain on site for 48 hours.

If a product application is regularly scheduled to be repeated within a set time frame (e.g., every 10 days), a single notification can be sent with the planned schedule for that application.

10.4 Mosquito Management
An Integrated Approach is listed in Appendix B Note all pesticides in this section can only be applied by someone who has a DEEP License in Mosquito and Biting Fly Pest Control
All applications of pesticides must be done under the direction of someone who has a DEEP Commercial Supervisor License.

Appendix A -Pesticide List

First Choice (Products having the lowest toxicity and/or least risk of exposure based on the formulation, method and frequency of application.) Included with first choice pesticide are 25B Products. 25 B products containing active and inert ingredients considered minimum risk**.** They are NOT required to have an EPA registration number and are exempt from EPA regulations on efficacy and toxicity.

Turf Herbicides/Growth Regulators

a) Acclaim Extra
b) Ammoniated Soaps of Fatty Acids
c) Clove Oil
d) Corn Gluten
e) Dismiss
f) Drive XLR8
g) Fusilade
h) Green Guardian/Natures Feed Weed Killer
i) Iron
j) Manage
k) Matratec (Clove Oil, Wintergreen Oil, Lactic Acid, N-Butyl Ester and Lecithin)
l) Primo
m) Roundup, Eraser, Prosecutor (Glyphosate)
n) Tanacity
o) Three Way or Three Way NR
p) Tupersan

Turf Insecticides

a) Acelepryn
b) Allectus
c) All Natural Lawn Grub Control (Rosemary, Sesame, Peppermint, Thyme, Cinnamon Garlic)
d) Conserve/Spinosad
e) Talstar
f) Deltagard
g) Merit
h) Tempo
i) Dylox
j) Ecotec (Rosemary Oil, Peppermint Oil, Wintergreen Oil, Lactic Acid, N-Butyl Ester, Vanillin, and Lecithin)
k) Enforcer Wasp and Hornet Killer
l) Neo-Tec S.O. (Sesame Oil)

Ornamental Insecticides

a) Insecticidal Soap (Safer Soap)
b) Neem Oil
c) Potassium Soaps of Fatty Acids
d) Dormant Oil
e) Malathion

Fungicides

a) Sporatec (Rosemary Oil, Clove Oil, Thyme Oil)
b) Heritage
c) Propiconizole
d) Eagle20EW
e) Subdue Max

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

Turf Herbicides

a) Citric Acid
b) Dimension
c) Goal
d) Poast
e) Scythe (Pelargonic Acid)

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

Turf Herbicides

a) Acetic Acid (Burnout)
b) Confront
c) Mecoprop (MCPP)
d) Momentum
e) Trimec

In all treatments, safety of the public and our children in particular is our first priority. To that end, care is taken in using the best cultural practices, choosing the best materials to perform the job while limiting the risk to people and the environment, including reducing the potential to contaminate drainage basins and water supplies in the area.

Appendix B

Mosquito/Biting Fly Plan

**** All applications must be made by a person possessing the appropriate pesticide licensure for Mosquitos and Biting Flies****

Non-Pesticide

- Keep weeds and brush trimmed and mowed throughout property.
- Flush birdbaths and wading pools weekly.
- Openings for standing water sources (septic tanks, roof gutters, rain barrels) can be sealed or covered with screening.
- Rotten stumps and tree holes can be filled with sand.
- Discarded tires should be disposed of properly or holes (0.5 inches or larger) can be drilled in the bottom of the tires to drain water. Tires can also be stacked and covered to prevent rainwater mosquito barrier from entering.
- Remove any artificial containers that hold water (e.g., wheelbarrows, pails, paint cans, etc.).
- Water lawns and gardens minimally to prevent puddling.
- Change water in ornamental pools and aquatic gardens or install an aerator.

Pesticide

Biological/ Pesticidal

- The use of biological pesticide Bacillus Thuringiensis (Bt) would be the first choice to treat larvae before they hatch. Bt is a naturally occurring soil bacteria that creates proteins that are toxic to larvae. Though natural, it does require a Connecticut Mosquitoes and Biting Flies license (7F) to use on school grounds
- Second choice would be the use of Tempo or Telstar to treat the flying adults
- Notifications and Record keeping of pesticide applications for Mosquito and Biting Insects would be handled the same as any other pesticide application as address above.

Attachment A

South Windsor High School
161 Nevers Rd.
South Windsor, CT 06074

South Windsor High School Annex
91 Ayers Rd.
South Windsor, CT 06074

Eli Terry Elementary School
569 Griffin Rd.
South Windsor, Ct 06074

Timothy Edwards Middle School
100 Arnold Way
South Windsor, CT 06074

Orchard Hill Elementary School
380 Foster St.
South Windsor, CT 06074

Pleasant Valley Elementary School
591 Ellington Rd.
South Windsor, CT 06074

P.R. Smith Elementary School
Avery St.
South Windsor, CT 06074