### Yamhill Carlton

### Integrated Pest Management Plan June 2012

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### I. INTRODUCTION

The Yamhill Carlton School District Board of Directors is committed to a pest management plan that puts a priority on the health and safety of staff and students. This integrated pest management plan will be used on all Yamhill Carlton School District facilities.

The Facilities subject to this plan include:

- A. School District Office
- B. Yamhill Carlton High School and all surrounding athletic fields
- C. Yamhill Carlton Intermediate School including the track and JV Baseball and Soccer fields. Strader field is excluded from this plan.
- D. Yamhill Carlton Elementary School and all surrounding athletic fields.

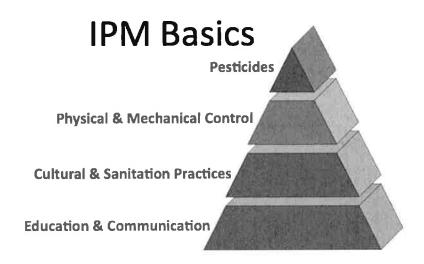
### II. WHAT IS INTEGRATED PEST MANAGEMENT?

The Yamhill Carlton School District Integrated Pest Management Plan (IPM), works to achieve long-term, environmentally sound pest suppression through a wide variety of tactics. Control strategies in this plan include structural and procedural improvements to reduce the food, water, shelter, and access used by pests. Pesticides will be used only in the most severe infestations or pest emergencies.

Fundamentals of the IPM Plan:

- A. <u>Education and Communication</u>: The foundation for an effective IPM program is education and communication. We need to know what conditions can cause pest problems, why and how to monitor for pests, proper identification, pest behavior and biology before we can begin to manage pests effectively. Communication about pest issues is essential. A protocol for reporting pests or pest conducive conditions and a record of what action was taken is the most important part of an effective IPM program.
- B. <u>Cultural & Sanitation</u>: Knowing how human behavior encourages pests helps you prevent them from becoming a problem. Small changes in cultural or sanitation practices can have significant effects on reducing pest populations. Cleaning under kitchen serving counters, reducing clutter in classrooms, putting dumpsters further from kitchen door/loading dock, proper irrigation scheduling, and over-seeding of turf areas are all examples of cultural and sanitation practices that can be employed to reduce pests.

- C. <u>Physical & Mechanical</u>: Rodent traps, sticky monitoring traps for insects, door sweeps on external doors, sealing holes under sinks, proper drainage and mulching of landscapes, and keeping vegetation at least 24 inches from buildings are all examples of physical and mechanical control.
- **D.** <u>Pesticides:</u> IPM focuses on remediation of the fundamental reasons why pests are here; pesticides should be rarely used and only when necessary.



### III. IPM DECISION-MAKING PROCESS - RESPONSIBILITIES

### B. Yamhill Carlton School Board Responsibilities

- 1. Annually the board will review Board Policy EBB Integrated Pest Management
- 2. Approve the Yamhill Carlton School District Integrated Pest Management Plan and review annually
- 3. Annually designate the Yamhill Carlton School District Integrated Pest Management Coordinator
- 4. Monitor the district's implementation of the IPM by requesting periodic reviews from the superintendent.

### C. Superintendent (or Designee) Responsibilities

- 1. Develop Integrated Pest Management Plan
- 2. Oversee the Integrated Pest management Plan with the IPM Coordinator
- 3. Review information prior to the declaration of a pest emergency
- 4. Annually receive written report from the IPM Coordinator and work with Coordinator to develop action plan for issues arising from pest management.

### D. IPM Plan Coordinator Responsibilities

The <u>Yamhill Carlton School District designates it Facility Director as the IPM Plan</u>
<u>Coordinator</u> who is given the authority for overall implementation and evaluation of this plan. The Coordinator is responsible for:

- 1. Attending not less than six hours of IPM training each year The training shall include at least a general review of IPM principles and the requirements of ORS 634.700 634.750.
- Conducting outreach to the school community (custodians, maintenance, construction, grounds, faculty, and kitchen staff) about the school's IPM plan; The IPM Plan Coordinator (or designee) will provide training as outlined in Section VII below.
- Overseeing pest prevention efforts;
   The Coordinator will work with custodians, teachers, and maintenance to reduce clutter and food in the classrooms, and seal up pest entry points.

- 4. Assuring that the decision-making process for implementing IPM in the district (section IV) is followed;
  - The Coordinator will continually assess and improve the pest monitoring/reporting/action protocol.
- 5. Assuring that all notification, posting, and record-keeping requirements in section VIII are met when the decision to make a pesticide application is made;
- 6. Maintaining the approved pesticides list as per section IX; and
- Responding to inquiries and complaints about noncompliance with the plan.
   Responses to inquiries and complaints will be in writing and kept on record with the Coordinator.
- 8. Complete annual IPM report as per section VI.

### **E.** Custodial Services Responsibilities

- 1. Attending annual IPM training provided by the IPM Plan Coordinator (or designee).
- 2. Develop a record keeping system with assigned clerical staff for all documentation related to integrated pest management.
- 3. Keeping records of pest complaints received via email in a log type format (work with clerical staff assigned this responsibility).
- 4. Placing and checking sticky insect monitoring traps in staff lounge, cafeteria, and kitchen as per the IPM Plan Coordinator's instructions.
- 5. Assuring floor under serving counters is kept free of food and drink debris.
- 6. Sealing up small cracks or holes when reported by teachers or noticed by custodian when this can be done in a short time (e.g. less than 15 minutes).
- 7. Recording his/her pest management actions in the pest logs (work with clerical staff assigned this responsibility).
- 8. Reporting pest problems that he/she cannot resolve in less than 15 minutes to the IPM Plan Coordinator via email with a cc to clerical staff responsible for IPM.
- 9. Reporting teachers to the building administrator who repeatedly refuse to reduce clutter and other pest-conducive conditions in their classrooms.

- 10. Reporting pest-conducive conditions to the IPM Plan Coordinator via email with a cc to clerical staff responsible for IPM\_if the custodian cannot fix them in less than 15 minutes.
- 11. Confiscating any unapproved pesticides (such as aerosol spray cans) discovered during inspections or regular duties and delivering them to the IPM Plan Coordinator.
- 12. Following up on issues found in annual inspection report as instructed by the IPM Plan Coordinator (IPM Plan Coordinator will determine which schools receive annual inspections based on pest and pesticide use history).

### F. Clerical Responsibilities

Each building will designate one clerical staff member to be responsible for managing and developing a system all record keeping related to this plan for their school. This includes:

Developing a pest log and communicating any pest issues with the building engineer.

### **G.** Maintenance Department Responsibilities

Staff involved in facilities maintenance are responsible for working with the IPM Plan Coordinator to ensure their daily tasks, projects and operations enhance effective pest management. This includes:

- Receiving training from the IPM Plan Coordinator (or designee of the Coordinator) on the basic principles of IPM, sealing pest entry points, and sanitation during construction projects.
- Continually monitoring for pest conducive conditions during daily work, and sealing small holes and cracks when noticed (if they can be sealed in a short period of time – e.g. 15 minutes).
- 3. Working with the Coordinator to develop a protocol and priority list with deadlines for sealing holes, installing external door sweeps, and other pest exclusion needs which cannot be done in a short period of time (e.g. 15 minutes).
- 4. Developing protocols and provisions for pest avoidance and prevention during construction and renovation projects. The IPM Plan Coordinator has the authority to halt construction projects if these protocols and provisions are not being met.
- 5. Keeping vegetation (including tree branches and bushes) at least three feet from building surfaces.
- 6. Proper mulching in landscaped areas to reduce weeds.

- 7. Proper fertilization, over-seeding, mowing height, edging, drainage, aeration, and irrigation scheduling in turf areas to reduce weeds (see OSU turf management publications EC 1521, EC 1278, EC 1550, EC 1638-E, and PNW 299 available free online at http://extension.oregonstate.edu/catalog/).
- 8. When the decision is made to apply a pesticide, following notification, posting, record-keeping and reporting protocols in Section VIII.

### H. Kitchen Staff Responsibilities

- Attending any annual IPM training provided by the IPM Plan Coordinator (or designee).
- 2. Assuring floor under serving counters is kept free of food and drink debris.
- 3. Promptly emptying and removing corrugated cardboard materials.
- 4. Keeping exterior kitchen doors closed.
- 5. Reporting pest conducive conditions that require maintenance (e.g., leaky faucets, dumpster too near building, build-up of floor grease requiring spray-washing, etc.) to building engineer and clerical staff responsible for documenting pest concerns.
- 6. Participating in any inspections conducted by custodian or IPM Plan Coordinator.
- 7. Checking sticky trap monitors once per month for cockroaches or drain flies. Immediately reporting these pests and any sightings of rodents or rodent droppings via email to the building engineer with a cc to the assigned clerical staff.

### I. All Staff Responsibilities

All staff includes any staff without a specific identified function in the IPM Plan. This includes teachers, teaching assistants, clerical staff etc.

- Attending any annual basic IPM training provided by the IPM Plan Coordinator (or designee).
- 2. Keeping their classrooms and work areas free of clutter.
- 3. Making sure students clean up after themselves when food or drink is consumed in the classroom.
- 4. Reporting pests and pest conducive conditions to the building engineer via email via email with a cc to the assigned clerical staff.

5. Following first steps of protocol for ant management before notifying the custodian (clean up any food the ants are eating, kill visible ants, wipe down area where ants were with soapy water, notify custodian only if ants continue to be found after following these steps).

### J. School Principal/Administrator Responsibilities

- 1. Scheduling time for teachers to receive annual training provided by the IPM Plan Coordinator (or designee).
- 2. Attending any annual IPM training for teachers.
- 3. Assign one clerical staff to be responsible for organization and documentation of all items related to the IPM.
- 4. Assuring that teachers keep their rooms clean and free of clutter in accordance with the IPM Plan Coordinator's instructions.
- 5. Assuring that all faculty, administrators, staff, adult students and parents receive the annual notice (provided by the IPM Plan Coordinator) of potential pesticide products that could be used on school property as per Section VIII.
- 6. Working with the IPM Plan Coordinator to make sure all notifications of pesticide applications reach all faculty, administrators, staff, adult students and parents.
- 7. Assuring that all staff fulfill their role as outlined in the district's IPM plan (reducing pest conducive conditions, participation in monitoring and pest log recording, attendance at IPM training(s), cooperation with the district's IPM Plan Coordinator).

### IV. IPM DECISION-MAKING PROCESS - MONITORING REPORTING AND ACTION PROTOCOL

An important component of the Yamhill Carlton School District integrated pest management plan is the ongoing monitoring for pests by all district staff.

### A. Monitoring: Observation

All staff will provide ongoing monitoring for pests within our facilities. Any evidence of pests or pest conducive conditions will be reported via email to the building engineer with a cc to assigned clerical staff.

The IPM Plan Coordinator (or designee) and Custodians will periodically conduct careful observations with written observations. The IPM Plan Coordinator will develop a monitoring schedule for all district facilities.

The periodic monitoring will include careful observation and written observations.

### 1. Buildings

- Pest conducive conditions inside and outside the building (structural deterioration, holes that allow pests to enter, conditions that provide pest harborage)
- The level of sanitation inside and out (waste disposal procedures, level of cleanliness inside and out, conditions that supply food and water to pests)
- The amount of pest damage and the number and location of pest signs (rodent droppings, termite shelter tubes, cockroaches caught in sticky traps, etc.)
- Human behaviors that affect the pests (working conditions that make it impossible to close doors or screens, food preparation procedures that provide food for pests, etc.)
- Their own management activities (caulking/sealing, cleaning, setting out traps, treating pests, etc.) and their effects on the pest population.

### 2. Grounds

- The condition of the plants (vigor and appearance)
- The amount of plant damage
- pH, phosphorus, and potassium levels of turf
- Kind and abundance of pests (weeds, insects, mites, moles, etc.) as well as natural enemies (ladybugs, spiders, lacewing larvae, syrphid fly larvae, etc.)
- Weather conditions (record any unusually dry, hot, wet, or cold weather in the past few weeks)
- Proper drainage
- Human behaviors that affect the plants or pests (foot traffic that compacts the soil, physical damage to plants caused by people, insistence on having certain plants grow in inappropriate situations, etc.)
- Management activities (pruning, fertilizing, mulching, aeration, treating pests, etc.) and their effects on the plants and the pest population.

### B. Monitoring: Sticky traps for insects

Sticky traps are neither a substitute for pesticides nor an alternative for reducing pest populations, but rather a diagnostic tool to aid in identifying a pest's presence, their reproductive stage, the likely direction pests are coming from, and the number of pests.

All staff will be made aware of the traps and their purpose so they don't disturb them. Custodians will be responsible for setting them out and checking them once per month (approximately 10 minutes), and replacing them once every four months (approximately 30 minutes). Kitchen staff will be responsible for checking those in the kitchen <u>primarily</u> for cockroaches and drain flies once per week (approximately 4 minutes).

After receiving training in the use of pest monitoring sticky traps by the IPM Plan Coordinator (or designee), custodial staff will be responsible for checking traps placed in pre-determined "pest-vulnerable areas" in the staff room, kitchen, and cafeteria (other areas that are often pest-vulnerable are: special education or kindergarten classrooms, home economics/life skills classrooms, concession stands, classrooms with animals/plants, custodial closets/storage) on a monthly basis, and replacing them every four months. If custodial staff cannot interpret what they find in the monitors they will contact the IPM Plan Coordinator for assistance.

### C. Reporting (pests, signs of pests, and conducive conditions)

When staff observe pests or pest conducive conditions they will email the building engineer with a cc to the assigned clerical staff. The building engineer and assigned clerical staff will keep a record of all pest reports.

### D. Reporting "Pests of Concern"

"A pest of concern" is a pest determined to be a public health risk or a significant nuisance pest. These include cockroaches (disease vectors, asthma triggers), mice & rats (disease vectors, asthma triggers), yellow jackets (sting can cause anaphylactic shock), cornered nutria, raccoons, cats, dogs, opossums, skunks (they can bite), and bed bugs (significant nuisance pest).

When pests of concern (or their droppings, nests, etc.) are observed, staff should immediately email the building engineer. The building engineer will contact the IPM Coordinator immediately.

### E. Action

Any items (such as sealing up holes) that maintenance/construction staff or custodial staff observe (or see on Pest Logs) that they can resolve in less than 15 minutes should be taken care of and this follow up action should be noted in the Pest Log.

The building engineer and assigned clerical staff will review Pest Logs weekly and any items he/she cannot resolve in less than 15 minutes should be marked in order of priority.

Pest Logs will be emailed to the IPM Plan Coordinator monthly. However, if there are pest concerns, the building lead custodian will contact the IPM coordinator as soon as possible via email. Any pest issues requiring district action will be documented on the district maintenance list and discussed for completion at the bi-monthly maintenance meetings.

The Coordinator will keep records of time and money spent to manage the pest, including copies of original receipts.

The appendices to this plan provide threshold levels for specific pests and the district response for each pest.

### F. Acceptable Thresholds (pest population density levels)

A threshold is the number of pests that can be tolerated before taking action. The acceptable threshold for cockroaches, mice, rats, raccoons, cats, dogs, opossums, skunks, and nutria is 0.

Acceptable thresholds for other pests will be determined by the IPM Plan Coordinator and the governing body.

### G. Inspections

### 1. Routine Inspections

The IPM Plan Coordinator will conduct routine inspections of different schools throughout the year (schedule and schools to be determined by the governing body and the Coordinator). Site custodians are required to accompany the Coordinator during the inspections. The inspections will typically last one to two hours and will focus on compliance with this plan and an inspection of the kitchen, staff room, and any other place of concern. After each routine inspection the Coordinator will write a one-page report on findings and recommendations. The report will be submitted to the school principal and custodian.

### 2. Annual Inspections

The IPM Plan Coordinator will conduct annual inspections at individual schools. Site custodians are required to assist the Coordinator with the annual inspection. The annual inspections will be more thorough than the routine inspections, and will use the Annual IPM Inspection Form (see Appendix 2) to guide the inspections. The specific schools to be inspected will be determined by the IPM Plan Coordinator and governing body based on a review of the annual number of pest problems and pesticide applications reported in the Annual IPM Report and Annual Report of Pesticide Applications.

### V. Pest Emergencies (see also Section VIII. B. below)

Pesticide use may be permitted in the event of a pest emergency. The IPM Coordinator may declare a pest emergency after consultation with the Superintendent or designee determines that the presence of a pest or pests immediately threatens the health or safety of students, staff, faculty members or members of the public using the campus, or the structural integrity of campus facilities, he or she may declare a pest emergency. Examples include (but are not limited to) yellow jackets swarming in areas frequented by children, a nutria in an area frequented by children, a half a dozen mice or rats running through occupied areas of a school building.

IMPORTANT: If a pest emergency is declared, the area must be evacuated and cordoned off before taking any other steps.

### VI. Annual IPM Report (completed by IPM Plan Coordinator)

In January of each year, the IPM Plan Coordinator will provide the governing body and the OSU School IPM Program Coordinator an annual IPM report. The report will include a summary of data gathered from Pest Logs, as well as costs for PMPs and pesticides (including turf and landscape pesticides). Costs for items such as sealants, fixing screens, door sweeps and other items that would not normally be considered part of pest control will not be recorded. See Appendix 9 for a template for the annual IPM report.

Prevention and management steps taken that proved to be ineffective and led to the decision to make a pesticide application will be copied and pasted or incorporated into the annual report of pesticide applications (see section VIII. D)

### VII. REQUIRED TRAINING/EDUCATION

ORS 634.720 (2) requires that the IPM Plan Coordinator "shall complete not less than six hours of training each year. The training shall include at least a general review of IPM principles and the requirements of ORS 634.700 to 634.750.

As required in ORS 634.700 (3) (i) all staff will receive education on the principals of IPM and sanitation, monitoring and inspection of pest control measures. After the initial training, the district will train all new staff with the same training. Basic training on the principals of IPM and the main points of this IPM Plan will also be provided to coaches who use athletic fields and will include an overview of basic monitoring and IPM practices for turf so they understand key pest problems to look out for and when to report them.

Each year the IPM Coordinator will determine based on pest concerns and documentation any need for annual or additional training of district staff. The need for training will be based on the job functions for each employee group and will be tailored to the IPM requirements for the individual employee groups.

### VIII. PESTICIDE APPLICATIONS: REQUIRED NOTIFICATION, POSTING, RECORD KEEPING, AND REPORTING

Any pesticide application (this includes weed control products, ant baits, and all professional and over-the-counter products) on school property must be made by a licensed commercial or public pesticide applicator. At the beginning of each school year, all faculty, administrators, staff, adult students and parents will be given a list of potential pesticide products that could be used in the event that other pest management measures are ineffective. They will also be informed of the procedures for notification and posting of individual applications, including those for pest emergencies. This information will be provided to all the above via e-mail as well as hard copy to adult students and parents.

### A. Notification and Posting for Non-emergencies

When prevention or management of pests through other measures proves to be ineffective, the use of a low-risk pesticide is permissible. Documentation of these measures is a pre-requisite to the approval of any application of a low-risk pesticide. This documentation will remain on file with the IPM Plan Coordinator and at the office of the head custodian where the application takes place.

No non-emergency pesticide applications may occur in or around a school until after while school is in session, unless the IPM Plan Coordinator authorizes an exception. If the labeling of a pesticide product specifies a reentry time, a pesticide may not be applied to an area of campus where the school expects students to be present before expiration of that reentry time. If the labeling does not specify a reentry time, a pesticide may not be applied to an area of a campus where the school expects students to be present before expiration of a reentry time that the IPM Plan Coordinator determines to be appropriate based on the times at which students would normally be expected to be in the area, area ventilation and whether the area will be cleaned before students are present.

The IPM Plan Coordinator (or a designee of the Coordinator) will give written notice of a proposed pesticide application (via the method most likely to reach the intended recipients) at least 24 hours before the application occurs.

The notice must identify the name, trademark or type of pesticide product, the EPA registration number of the product, the expected area of the application, the expected date of application and the reason for the application.

The IPM Plan Coordinator (or a designee of the Coordinator) shall place warning signs around pesticide application areas beginning no later than 24 hours before the application occurs and ending no earlier than 72 hours after the application occurs.

A warning sign must bear the words "Warning: pesticide-treated area", and give the expected or actual date and time for the application, the expected or actual reentry time, and provide the telephone number of a contact person (the person who is to

make the application and/or the IPM Plan Coordinator).

### **B.** Notification and Posting for Emergencies

- 1. The IPM Plan Coordinator may not declare the existence of a pest emergency until after consultation with school faculty and administration.
- 2. If a pesticide is applied at a campus due to a pest emergency, the Plan Coordinator shall review the IPM plan to determine whether modification of the plan might prevent future pest emergencies, and provide a written report of such to superintendent or designee.
- 3. The Superintendent or designee shall review and take formal action on any recommendations in the report.
- 4. The declaration of the existence of a pest emergency is the only time a non low-impact pesticide may be applied.
- 5. If a pest emergency is declared, the area must be evacuated and cordoned off before taking any other steps.
- 6. If a pest emergency makes it impracticable to give a pesticide application notice no later than 24 hours before the pesticide application occurs, the IPM Plan Coordinator shall send the notice no later than 24 hours after the application occurs.
- 7. The IPM Plan Coordinator or designee shall place notification signs around the area as soon as practicable but no later than at the time the application occurs.
- 8. Note: ORS 634.700 also allows the application of a non-low-impact pesticide "by, or at the direction or order of, a public health official". If this occurs, every effort must be made to comply with notification and posting requirements above.

### C. Record Keeping of Pesticide Applications

The IPM Plan Coordinator or designee shall keep a copy of the following pesticide product information on file at the head custodian's office at the school where the application occurred, and at the office of the IPM Plan Coordinator:

- 1. A copy of the label
- 2. A copy of the MSDS
- 3. The brand name and USEPA registration number of the product
- 4. The approximate amount and concentration of product applied

- 5. The location of the application
- 6. The pest condition that prompted the application
- 7. The type of application and whether the application proved effective
- 8. The pesticide applicator's license numbers and pesticide trainee or certificate numbers of the person applying the pesticide
- 9. The name(s) of the person(s) applying the pesticide
- 10. The dates on which notices of the application were given
- 11. The dates and times for the placement and removal of warning signs
- 12. Copies of all required notices given, including the dates the IPM Plan Coordinator gave the notices

The above records must be kept on file at the head custodian's office at the school where the application occurred, and at the office of the IPM Plan Coordinator, for at least four years following the application date.

### D. Annual Report of Pesticide Applications

In July of each year, the IPM Plan Coordinator will provide the Superintendent or designee and the OSU School IPM Program Coordinator an annual report of all pesticide applications made the previous year. The report will contain the following for each application:

- 1. The brand name and USEPA registration number of the product applied
- 2. The approximate amount and concentration of product applied
- 3. The location of the application
- 4. The prevention or management steps taken that proved to be ineffective and led to the decision to make a pesticide application
- 5. The type of application and whether the application proved effective

### IX. APPROVED LIST OF LOW-IMPACT PESTICIDES

Note: All pesticides used must be used in strict accordance with label instructions.

According to ORS 634.705 (5), the governing body of a school district shall adopt a list of low-impact pesticides for use with their integrated pest management plan. The governing body may include any product on the list except products that:

- (a) Contain a pesticide product or active ingredient that has the signal words "warning" or "danger" on the label;
- (b) Contain a pesticide product classified as a human carcinogen or probable human carcinogen under the United States Environmental Protection Agency 1986 Guidelines for Carcinogen Risk Assessment; or
- (c) Contain a pesticide product classified as carcinogenic to humans or likely to be carcinogenic to humans under the United States Environmental Protection Agency 2003 Draft Final Guidelines for Carcinogen Risk Assessment.

As a part of pesticide registration under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) and re-registration required by the Food Quality Protection Act (FQPA), EPA Office of Pesticide Programs (OPP) classifies pesticide active ingredients (a.i.) with regards to their potential to cause cancer in humans. Depending on when a pesticide active ingredient was last evaluated the classification system used may differ as described above.

The National Pesticide Information Center (http://npic.orst.edu/) can be contacted at 1.800.858.7378 or npic@ace.orst.edu for assistance in determining a pesticide i.e. cancer classification.

The most current list of approved low-impact pesticides is available on our website at www.Yamhill Carlton.k12.or.us

### Appendix 1-g Grounds Pests - ATHLETIC FIELD WEEDS - IRRIGATED

(Appendix 1-f excerpted and modified from Eugene School District 4J Landscape Matrices)

TEXT IN RED IS GENERIC AND MUST BE CHANGED FOR INDIVIDUAL SCHOOLS OR DISTRICTS

MATRIX OF HIERARCHICAL STEPS TO MANAGING PESTS - Level 1 is the preferred first action, Level 2 is the preferred account action, Level 3 is the preferred last action.

This matrix is to be used in conjunction with our School District IPM Plan

This is a matrix that identifies a pest problem or issue and defines approved practices for proper control.

The IPM Plan Coordinator (or designee) must approve any additional strategies before they are used.

Site personnel must always consult the Grounds Staff Lead prior to taking action against pests on District property.

Although irrigation, top dressing, over seeding, fertilization, and aeration are the dominant variables in maintaining quality turf, there are instances in which fields are so infested with broadleaf plants that they are no longer usable for athletic events. The uneven playing surfaces caused by the mix of grass and broadleaf weeds, such as plantains, create significant variations in footing. Sometimes the fields are just difficult on which to play; sometimes they are unsafe for play. Besides the uneven playing surfaces the presence of a large number of weeds also improves the habitat for gophers, which prefer this vegetation for food, resulting in a very uneven surface for running with large mounds and deep holes. These render the field unplayable, and have resulted in a number of injuries to people who try to play on them. Facilities has embarked on a more aggressive gopher and mole control program. Eliminating their preferred food source (the roots of broadleaf vegetation) improves the effectiveness of this program. (See: Gophers & Moles matrix)

LEVEL 1: Action approved for school sup	ervised volunteer or district staff				
ACTION	Threshold	DONE BY: VOLUNTEER	STAFF	IPM RESPONSE CODE	COMMENTS
SITE INSPECTION	Presence/Complaint	х	X	Т	Small number of localized weeds
INSPECT & ADJUST IRRIGATION SYSTEM	/ Presence/Complaint	х	X	T/P	Adjustment by appropriate staff
HAND CULTIVATING	Complaint	х	х	Р	Baseball diamonds
INCREASED MOWING	Complaint/work order/site inspection	x	х	Р	Reduces seeds
OVER SEEDING	Complaint/work order/site inspection	x	х	P/S	Helps grass compete with weeds
FIELD RENOVATION/REPAIR IRRIGATION, TOP DRESSING, OVER SEEDING, FERTILIZATION, AERATION	Complaint/work order/site inspection	х	x	P/S	Could be routine maintenance if labor is available District specified fertilizer Compost maybe used as fertilizer if budgets allow
LEVEL 2: Action approved for licensed ap	oplicator, (district staff or contractor)				
ACTION	Threshold	VOLUNTEER	STAFF	CODE	<u>COMMENTS</u>
NO CURRENTLY APPROVED TREATMEN	π				
LEVEL 3: District and Site approved actio	n for licensed applicator (district staff o	or contractor) requir	ed		
ACTION	Threshold	VOLUNTEER	STAFE	CODE	COMMENTS
NO CURRENTLY APPROVED TREATMEN	т				

IPM (Integrated Pest Management) RESPONSE CODE REFERENCE

P - Prevention

E - Exclusion

S - Structural Modification

T - Tolerance

X = Person who may respond to action items listed

Version 2.0 Last updated 6/7/2012

Periodic updates available at www.ipmnet.org/tim

### **Annual IPM Inspection Form**

### (Pests and Pest Conducive Conditions Checklist)

School District				
School or Site				
Date				
Inspected by				
•				
Entryways	Yes	No	Not Sure	N/A
Doors closed when not in use				
Doors shut tight and close on their own				
Door sweeps installed so no ¼" gaps				

If pests are present in the area, write what kind here	
Notes:	

Outside Areas	Yes	No	Not Sure	N/A
Area free from trash, old vehicles, other pest attractants				
All trash cans have secure lids				
Trash cans cleaned regularly				
Site has good drainage and is free from standing water				
Bushes, shrubs, trees at least 18" from building				
Tree branches not overhanging roof				
All dumpsters located away from building				
All dumpsters clean				
No gaps between windows or screens and frame				
Eves and roofs free from birds, wasps, etc.				
Play structures free from wasp harborage areas				
2				

If pests are present in the area, write what kind here	
Notes:	

If pests are present in the area, write what kind here	
Notes:	

Custodial and Custodial Closets	Yes	No	Not Sure	N/A
Area is free of unauthorized pesticides				
Mops are clean and hanging up when not in use				
Closets are free of trash and food				
Custodial closets are in good order and organized				
Trash cans and maid carts are emptied daily and clean				
Break area is clean and free of food, crumbs and trash				
Storage areas free of items stored in cardboard boxes				
Break area free of cloth covered couches and chairs				
Custodians are trained in the IPM process				
IPM records (including pest logs, monitoring trap data,				
pest management actions, etc.) are on file				

If pests are present in the area, write what kind here	
Notes:	

Boiler Rooms and Fan Rooms	Yes	No	Not Sure	N/A
Free of unauthorized pesticides				
Room is free of standing water				
Room is cleaned regularly				
Room is free of trash and food				
Room is free of storage, especially in cardboard boxes				
Floor drains are clean				
Plumbing is free of leaks and condensation				
Cracks or holes in floors and walls are sealed properly				
Outside air intakes are properly screened & free of trash				

If pests are present in the area, write what kind here	
in the second se	14
Notes:	

Yes	No	Not Sure	N/A
	Yes	Yes No	Yes No Not Sure

If pests are present in the area, write what kind here							
Natar							
Notes:							

Classrooms or Offices Room # .	Yes	No	Not Sure	N/A
Free of unauthorized pesticides				
Free of clutter				
Indoor plants healthy and free of pests				
Desks, closets, and cubbies clean and free of food, clutter				
All food items are stored in sealed plastic containers				
Animal or bird cages are clean in and around the area				
Any pet food is stored in sealed plastic containers				
Sinks are free of dripping or standing water				
Gaps or holes under sinks or counters have been sealed				
Holes or gaps to the outside are sealed				
Outside windows and doors close tight and have no gaps				
Window screens (if any) are in good repair				
Nothing (except short-term) is stored in cardboard boxes				

If pests are present i	n the area, write what kind he	re
•	•	

Notes:

Classrooms or Offices Room #	Yes	No	Not Sure	N/A
Free of unauthorized pesticides				
Free of clutter				
Indoor plants healthy and free of pests				
Desks, closets, and cubbies clean and free of food, clutter				
All food items are stored in sealed plastic containers				
Animal or bird cages are clean in and around the area				
Any pet food is stored in sealed plastic containers				
Sinks are free of dripping or standing water				
Gaps or holes under sinks or counters have been sealed				
Holes or gaps to the outside are sealed				
Outside windows and doors close tight and have no gaps				
Window screens (if any) are in good repair				
Nothing (except short-term) is stored in cardboard boxes				

If pests are present in the area, write what kind here									
Notes:									

Classrooms or Offices Room #	Yes	No	Not Sure	N/A
Free of unauthorized pesticides				
Free of clutter				
Indoor plants healthy and free of pests				
Desks, closets, and cubbies clean and free of food, clutter				
All food items are stored in sealed plastic containers				
Animal or bird cages are clean in and around the area				
Any pet food is stored in sealed plastic containers				
Sinks are free of dripping or standing water				
Gaps or holes under sinks or counters have been sealed				
Holes or gaps to the outside are sealed				
Outside windows and doors close tight and have no gaps				
Window screens (if any) are in good repair				
Nothing (except short-term) is stored in cardboard boxes				

If pests are present in the area,	write what kind here	
'		

Notes:

Other Room:	Yes	No	Not Sure	N/A
Free of unauthorized pesticides				
Room is free of standing water				
Room is free of trash and food				
Room is free of storage, especially in cardboard boxes				
Any food items are stored in sealed plastic containers				
Free of clutter				
Cracks or holes in floors and walls are sealed properly				
Outside windows and doors close tight and have no gaps				
Window screens (if any) are in good repair				
window sercens (in any) are in Bood repun				

If pests are present in the area, write what kind here	
Notes:	

### **Appendix 4**

### **Training Outlines**

### **CUSTODIAL STAFF TRAINING**

- 1. Concerns about Pests and Pesticides
  - a. Pests which are Public Health Risks
  - b. Pesticide Risks
- 2. Introduction to Integrated Pest Management (IPM)
  - a. IPM is...
  - b. IPM involves...
- 3. Benefits of IPM to custodial staff
  - a. Recognition of your important role within the school district
  - b. More effective, efficient, and long-lasting solution to specific pest issues
  - c. Reduced pesticide use
  - d. Improved children's health
  - e. Long-term cost savings for school and school district
  - f. Better organized working environment
- 4. Pest basics
  - a. Food
  - b. Water
  - c. Shelter
- 5. Role of custodial staff in a school IPM program
  - a. Custodial staff are critical to the success of a district's IPM program
  - b. Awareness of pest conducive conditions
  - c. Reduction of pest conducive conditions
  - d. Use of insect monitoring traps
  - e. Communication
    - i. Report pests in pest log
    - ii. Report maintenance needs
    - iii. Regular communication and follow up with facilities staff/IPM Coordinator
  - f. Sanitation
  - g. Cultural changes
  - h. Attend annual IPM training provided by the IPM Plan Coordinator
  - i. When to take action against a pest: appropriate pest-response action for custodial staff
- 6. Requirements of ORS 634.700 634.750 (IPM plan, Coordinator, no pesticides applied without license, etc.)

### MAINTENANCE/CONSTRUCTION STAFF TRAINING

- 1. Concerns about Pests and Pesticides
  - a. Pests which are Public Health Risks
  - b. Pesticide Risks
- 2. Introduction to Integrated Pest Management (IPM)
  - a. IPM is...
  - b. IPM involves...
- 3. Benefits of IPM to schools
  - a. More effective, efficient, and long-lasting solution to specific pest issues
  - b. Reduced pesticide use
  - c. Improved children's health
  - d. Long-term cost savings for school and school district
  - e. Better organized working environment
- 4. Pest basics
  - a. Food
  - b. Water
  - c. Shelter
- 5. Role of maintenance/construction staff
  - a. Monitoring for pest conducive conditions
  - b. Working with Coordinator to develop priority list, deadlines for pest exclusion needs
  - c. Working with Coordinator to develop protocols and provisions for pest avoidance and prevention during construction and renovation projects
  - d. Attend annual IPM training provided by the IPM Plan Coordinator
- 6. Requirements of ORS 634.700 634.750 (IPM plan, Coordinator, no pesticides applied without license, etc.)

### **GROUNDS STAFF TRAINING**

- 1. Concerns about Pests and Pesticides
  - a. Pests which are Public Health Risks
  - b. Pesticide Risks
- 2. Introduction to Integrated Pest Management (IPM)
  - a. IPM is...
  - b. IPM involves...
- 3. Benefits of IPM to schools
  - a. More effective, efficient, and long-lasting solution to specific pest issues
  - b. Reduced pesticide use
  - c. Improved children's health
  - d. Long-term cost savings for school and school district
- 4. Grounds Pest Basics
  - a. Food
  - b. Water
  - c. Shelter
- 5. Grounds Pest Specifics
  - a. Review of OSU turf management publications
  - b. Review of model plan appendix 1-g
  - c. Mulching landscaped areas
  - d. Aeration of turf
  - e. Irrigation scheduling
  - f. Gophers, Moles, Voles
  - g. Other pests
- 6. Role of Grounds Staff
  - a. Keeping all vegetation at least three feet from buildings
  - b. Proper aeration, mulching, irrigation scheduling, etc.
  - c. Attend annual IPM training provided by the IPM Plan Coordinator
  - d. Pesticide application notification, posting, record keeping, and reporting
- 7. Requirements of ORS 634.700 634.750 (IPM plan, Coordinator, no pesticides applied without license, etc.)

### KITCHEN STAFF TRAINING

- 1. Concerns about Pests and Pesticides
  - a. Pests which are Public Health Risks
  - b. Pesticide Risks
- 2. Introduction to Integrated Pest Management (IPM)
  - a. IPM is...
  - b. IPM involves...
- 3. Benefits of IPM to Kitchen Staff
  - a. Reduced potential for pest-vectored diseases
  - b. More effective, efficient, and long-lasting solution to specific pest issues
  - c. Reduced pesticide use
  - d. Improved children's health
  - e. Long-term cost savings for school and school district
- 4. Pest Basics
  - a. Food
  - b. Water
  - c. Shelter
  - d. Kitchen and pantry are often the most pest-prone area of a school
- 5. Role of Kitchen Staff in a School IPM Program
  - a. Awareness of pest conducive conditions in kitchen, pantry, dumpster area
  - b. Reduction of pest conducive conditions in kitchen, pantry, and dumpster area
  - c. Communication
    - i. Report pests in pest log
    - ii. Report maintenance needs
  - d. Sanitation
  - e. Cultural Changes
  - f. Education
    - i. Maintain IPM awareness among all kitchen staff
    - ii. Participation in IPM inspections of kitchen
    - iii. Attend annual IPM training provided by IPM Plan Coordinator
  - g. When to take action against a pest: appropriate pest-response action for kitchen staff
- 6. Requirements of ORS 634.700 634.750 (IPM plan, Coordinator, staff cannot use pesticides)

### **FACULTY TRAINING**

- 1. Concerns about Pests and Pesticides
  - a. Pests which are Public Health Risks
  - b. Pesticide Risks
- 2. Introduction to Integrated Pest Management (IPM)
  - a. IPM is...
  - b. IPM involves...
- 3. Benefits of IPM to Faculty
  - a. More effective, efficient, and long-lasting solution to specific pest issues
  - b. Reduced pesticide use
  - c. Improved children's health
  - d. Long-term cost savings for school and school district
  - e. Better organized working environment
- 4. Pest Basics
  - a. Food
  - b. Water
  - c. Shelter
- 5. Role of Faculty in a School IPM Program
  - a. Awareness of pest conducive conditions in your classroom and teacher's lounge
  - b. Reduction of pest conducive conditions in your classroom and teacher's lounge
  - c. Monitoring & communication
    - i. Report pests in pest log
    - ii. Report maintenance needs
  - d. Sanitation
  - e. Cultural changes
  - f. Education
    - i. Involve students in classroom pest management (monitoring, sanitation, cultural changes)
    - ii. Attend annual IPM training provided by IPM Plan Coordinator
  - g. When to take action against a pest: appropriate pest-response action for faculty
- 6. Requirements of ORS 634.700 634.750 (IPM plan, Coordinator, teachers cannot use pesticides)

### Appendix 1a

### **Small Ants**

Most small ants in Oregon are harmless. They do not transmit human disease and are thus called nuisance ants. Pavement Ants and Odorous House Ants are the two most common types of ants found in Oregon schools.

Nuisance ants may nest outdoors under objects, in soil, or within wall voids of structures. Pavement ants nest in soil under concrete walkways or foundations. Ants sometimes enter buildings in search of food or water, or during periods of heavy rain. Some sugar-feeding ants may move indoors in winter when their preferred food source (honeydew from aphids) is gone. Ants may also be more noticeable in spring or summer as colonies are dividing and establishing new nests.

### **Pavement Ant**

The pavement ant gets its name from commonly locating its nest in or under cracks in pavement. It also nests under stones and at the edges of pavement. In winter it will nest in buildings in crevices adjacent to a heat source. Pavement ants tend aphids for their honeydew, and feed on seeds and insect remains. Indoors they may feed on sweets and greasy food.

### **Odorous House Ant**

The odorous house ant gets its name from the pungent, rotten-coconut-like odor given off when it is crushed. It nests in a wide variety of places both outdoors and indoors. Odorous house ants tend aphids (as well as scale insects and mealybugs) for their honeydew, which they prefer, but they also feed on other insects. Indoors they may feed on sweets, protein foods, and greasy food. When odorous house ants are disturbed or threatened, they can break off from the main colony and form satellite colonies. This is called "budding". When odorous house ants disperse and form new colonies and nests in ths way, one colony of ants can actually have multiple satellite colonies and multiple queens. Disturbances, such as spraying a pesticide on a group of odorous house ants, actually increases the number of ants because of budding.

### When Nuisance Ants Come Inside

Total eradication of nuisance ants indoors is extremely difficult. The district's first response to any trail of ants is to clean surfaces with soapy water or a disinfectant. Fortunately, most ants will leave on their own if denied access to food and water. Additional control measures are warranted if ants are entering a school in large enough numbers to cause a disruption in the learning environment. The district will use mechanical methods (such as crack sealing) first, and may use low-impact pesticide baits only as a last resort.

If nuisance ants become a disruption at a school, staff should take the following steps:

Tim Stock stockt@science.oregonstate.edu Periodic updates will be posted at www.ipmnet.org

- Ask the custodian to vacuum any food crumbs, clean up any garbage or spills, and to use soap and water to clean areas where ant trails are seen (unless the areas are small and staff can clean them quickly). This can prevent other ants from following the pheromone trails that ants leave to mark the way to food.
- Make sure that any other food or water sources are removed, placed in tightly sealed containers, cleaned, or repaired. Food and water sources can include human or pet food, recycling bins, leaking faucets, clogged drains, damp wood, etc. For repairs, ask your custodian to fill out a work request on line.
- If staff finds a place where an ant trail enters the room or building, they should mark it for later sealing by the custodian or the maintenance/construction department. A temporary "seal" can be made with duct tape, if desired.

### PROTOCOL FOR TREATING NUISANCE ANTS

### A. When staff observe a small number of ants (e.g. under 10 ants) they must:

- 1st) Spend two minutes trying to find out where the ants are coming from
- 2nd) Kill the ants with a paper towel or similar
- 3rd) Remove any food or liquid the ants were eating
- 4th) Wipe down the area with soapy water or disinfectant to remove pheromone trails
- 5th) Jot down any action(s) they take in the Pest Log

### B. If the ants come back or there are more than a small number (e.g. under 10 ants):

- 1st) Spend two minutes trying to find out where the ants are coming from
- 2nd) Jot down any action(s) they take in the Pest Log
- 3rd) Ask the custodian to come with vacuum and sealant as soon as he/she is able

### C. The custodian will:

- 1st) Spend two minutes trying to find out where the ants are coming from
- 2nd) Vacuum up the ants and any food debris nearby (vacuum up a tablespoon of corn starch to kill most of the ants in the vacuum bag, then put the vacuum bag inside plastic garbage bag, seal it, and dispose of it properly)
- 3rd) Seal up the crack or hole where the ants were coming from (do what can be done in less than 15 minutes)
- 4th) Wipe down the area with soapy water or disinfectant to remove pheromone trails
- 5th) Jot down the above in the Pest Log

### When to use baits:

To avoid a proliferation of small ants and/or unnecessary applications of pesticides, the routine use of ant baits is not permitted without first:

Tim Stock stockt@science.oregonstate.edu Periodic updates will be posted at www.ipmnet.org

- 1) Educating staff on sanitation, monitoring, and exclusion as the primary means to control the ants.
- 2) Establishing an acceptable pest population density (e.g. 10 ants).
- 3) Improving sanitation (e.g. cleaning up crumbs and other food sources) and structural remediation (sealing up cracks or holes where the ants are coming from).
- 4) Following A, B, and C above.

If the use of a low-impact pesticide baits are deemed necessary, they will be placed in childproof containers, and used only in areas that are out of sight and reach of children/students. Small amounts of low-impact pesticide gels or pastes may also be placed in cracks and crevices or low-impact pesticide dusts may be sprayed into wall voids.

Staff must be informed that sanitation is important to ensure the effectiveness of any baits that are used. Ants are less likely to take a bait if there are more attractive food and water sources nearby.

### ADDITIONAL EXCLUSION MEASURES

In addition to sealing up cracks and holes where the ants are coming from, custodial and/or maintenance/construction staff should routinely seal up as many cracks and holes as time allows, especially those around:

- Baseboards
- Cupboards
- Electrical outlets
- Pipes
- Sinks
- Toilets

Outdoors, pipe and electrical chases should be sealed off.

Grounds staff should prune away any tree limbs or bushes (leaving about 24" of space) that are touching the building.

Appendix 3, Version 2.0 Last edited 6/7/12

Appendix 3

Seen any rodents, bugs, or "conducive conditions" lately?

Please jot down your observations for us!

### insproted plans protection center



## Integrated Pest Management

## Pest Log: KITCHEN

1 - 1 1 - 1	Initials & Date				
Respondent	Action Taken and Cost (if any)				
ing	Pest/Problem Description				
Report of Pest Sighting	Location in the kitchen				
	Name		\$6 80		
	Date				

Please jot down your observations for us! Seen any rodents, bugs, or "conducive conditions" lately?





Oregon State

## Integrated Pest Management

## STAFF LOUNGE AND OTHER Pest Logs

		Initials & Date	*			
	Respondent	Action Taken and Cost (if any)				
	Si di	Pest/Problem Description				
	Report of Pest Sighting	Room# and location				
rest Log:		Name			w	
		Date				

Seen any rodents, bugs, or "conducive conditions" lately?

Please jot down your observations for us!





### Integrated Pest Management

# Pest Log: CAFETERIA

Respondent	Initials & Date			
	Action Taken and Cost (if any)			
Report of Pest Sighting	Pest/Problem Description			
	Location in the cafeteria			
	Name	<u> </u>		
	Date			

### Appendix 6

### **Pesticide Application Notification Form**

A pesticide application is scheduled for / was performed on:									
DATETIME									
Pesticide Common Name	Pesticide Trade Name / Type of Pesticide Product	EPA Registration Number							
Expected Area of the pesticide application:									
Expected date of application:									
Reason for the application:									