**YOUR School District**

**IPM Plan**

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# IPM POLICY STATEMENT

### BOARD POLICY

It is the policy of the Board of Education that all pests within the YOUR School District will be managed using Integrated Pest Management (IPM) strategies to improve the environmental health and safety for the occupants of its buildings.

### GUIDELINES

This policy applies to the management of pests, including: vertebrate pests, arthropod pests, and plant, weed or fungal pests occurring inside or outside of district buildings, athletic fields, and play areas.

IPM strategies for the management of pests include: education of administration, faculty and staff, improved sanitation techniques, exclusion of pests from buildings or turf areas, alteration of cultural practices of administration, faculty and staff, pest monitoring, pesticides (only as a last resort if non-chemical techniques alone are inadequate to manage pests), setting tolerance/action thresholds and no-action alternatives.

The Board of Education will name an IPM program coordinator to oversee the IPM program. The role of the IPM Coordinator will be made a permanent component of the selected individual’s position title/description (in writing). It is recommended that the IPM Coordinator assemble an IPM Committee for program review, assistance and to give direction on how to improve the program over time.

The IPM Coordinator will be given the authority to request the compliance of administration, faculty and staff to alter cultural practices (e.g., ask the aforementioned groups to store food in pest-proof containers, reduce clutter in a workspace, remove unauthorized furniture or appliances, to shut doors and windows, improve sanitation techniques, etc.) to meet pest management objectives.

YOUR School District will develop a detailed IPM plan outlining the full functioning of the IPM program. Administration, faculty and staff will be made aware of the IPM program on a yearly basis and will be required to actively participate in IPM-based education and fulfill their designated roles.

# SCOOL IPM PLAN

### IPM IMPLEMENTATION PLAN

Pests are populations of living organisms (animals, plants or microorganisms) that interfere with a healthy environment in our facilities.

Integrated Pest Management (IPM) is a sustainable approach to managing pests by combining biological, cultural, educational, physical and chemical tools in a way that minimizes economic, health and environmental risks.

YOUR school District has adopted an Integrated Pest Management Plan for the buildings and grounds owned by YOUR School District. The plan outlines procedures to be followed to protect the health and safety of students, staff, administrators and visitors from pests and pesticide hazards. The IPM plan will be stored in the office of the IPM Coordinator, and in each district building in the Head Custodian’s/Site IPM Coordinator’s office. The plan will follow the requirements outlined in Utah Administrative Rule R392-200-7(12) (see Appendix A for the full Rule).

IPM Plan Objectives:

* Manage pests to a tolerable level inside school and district buildings in addition to athletic fields, ornamental plantings, play areas and other outdoor areas.
* Eliminate significant threats to the health and safety of students, staff, administrators and the public caused by pests or improper pest control practices.
* Prevent loss or damage to structures or property by pests or improper pest management practices.
* Protect and improve the environmental quality inside and outside buildings.
* Preferentially use non-chemical pest management tactics to manage pests.

### ROLES

All district stakeholders have a role in the IPM program that will ensure successful implementation of the plan and adherence to the R392-200-7(12). Stakeholder roles are defined below and roles will be made known to each group through various means of communication and education at a minimum of once per year (see the section on Education below).

###### IPM Coordinator

The IPM Coordinator is responsible to develop, implement and promote the IPM plan and to coordinate pest management-related activities between school administrators, faculty, staff, service providers, students and parents.

Specific roles of the IPM Coordinator:

* Manage the day-to-day activities of the IPM program.
* Oversee the development and implementation of an IPM policy and program.
* Develop a permanent IPM Coordinator job description to be included as part of the Director of Building and Ground’s job responsibilities to sustain the IPM Coordinator position and IPM program in the future.
* Develop or assist in the development of IPM educational materials for all stakeholders.
* Coordinate with principals and district administration to implement the education and IPM training provisions of the IPM program.
* Authorized by administration to uphold the IPM program principles in any district school, building or outside area.
* Gain expertise on pest management issues through training/education opportunities, self-study and experience.
* Serve as the primary contact for pest control matters and coordinating all pest control decisions for the school district, making pest-management decisions based on sound IPM principles.
* Schedule and facilitate IPM Committee meetings at least yearly.
* Set pest management action levels.
* Monitor/Inspect for pest problems or areas where pest problems may occur.
* Keep track of program information and data.
* Maintain records of pesticides and pesticide use, pest sightings and other pest management actions.
* Facilitate communication about pest management among district personnel.
* Accurately identify pests (this can be accomplished with the aid of USU).
* Evaluate the effectiveness of pest management procedures and revising the IPM plan accordingly.
* Ensure the completion of work orders for structural repairs and housekeeping and sanitation measures intended to reduce or prevent pest problems.
* Oversee, communicate with and educate pest management contractors.
* Inform contractors of the district's IPM policy and pest management procedures.
* Assure that all of the contractor's recommendations on maintenance and sanitation are carried out where feasible.
* Ensure that pest management implications are considered when planning new construction or site modifications.
* Participate in School IPM educational opportunities such as Utah Coalition for Integrated Pest Management in School meetings, IPM-focused webinars and Utah Facility Managers Association meetings, etc.

###### Site IPM Coordinators (Head Custodians)

The Site IPM Coordinator manages the day-to-day activities of the IPM program at the building/school level and reports to the IPM Coordinator when necessary.

Specific roles of the Site IPM Coordinators:

* Receive annual IPM training by the IPM Coordinator or his/her designee in pest identification; pest biology, habitat, behavior and reproduction; identification and correction of pest conducive conditions; pest reporting and management; monitoring techniques using “sticky traps”; IPM inspection procedures; IPM pest mitigation strategies; recordkeeping; pesticide hazards, notification and Safety Data Sheet (SDS) requirements; exclusion methods and materials.
* Upon completion of the IPM education program, Site IPM Coordinators will be tested to demonstrate they have a minimum level of IPM proficiency. Certificates of completion will be given to Site IPM Coordinators that successfully complete the educational program and test.
* Site IPM Coordinators will be given an IPM binder and will be responsible for maintaining/updating the binder in their office that can be made readily available to County Health Inspectors. The binder will contain:
	+ IPM education completion certificate.
	+ A copy of the district IPM Plan (with or without appendices).
	+ Pest monitoring/reporting forms and recorded data.
	+ A map of the building with pest monitor locations indicated on the map.
	+ Approved pesticides list.
	+ Safety Data Sheets (SDS) of all chemicals on the Approved Pesticides List.
	+ Copies of work orders pertaining to pest management.
	+ Service/action reports from pest management professionals, or recorded actions taken by the head custodian to mitigate a particular pest issue.
	+ Building/pest inspection reports.
	+ Pest control action plans for common pests (See Appendix B - O).
	+ Other IPM resource materials.
* The Site IPM Coordinator will communicate directly with the IPM Coordinator for assistance with pest identification, pest management questions, and when needing to resolve IPM issues with administration, faculty, staff, service providers, students or parents. As the Site Coordinator gains experience the need to contact the IPM Coordinator will diminish, but may still be necessary in some cases.
* IPM activities of the Site IPM Coordinator:
	+ Receive training from the IPM Coordinator or qualified supervisor on IPM principles and practices and their specific IPM roles.
	+ Follow IPM practices and principles when dealing with pest issues.
	+ Maintain building cleanliness and take care of the building and grounds.
	+ Practice all IPM sanitation and maintenance techniques.
	+ Maintain IPM binder in office.
	+ Run the pest monitoring program, including setting traps in pest vulnerable areas, maintaining the traps on a monthly basis (unless greater monitoring frequency is need for a specific pest issue) and recording/storing pest data from the traps.
	+ Submit pest-control related work orders to Maintenance.
	+ Record/report pest complaints from administration, faculty and staff.
	+ Recognize and correct conditions that may lead to pest problems (pest conducive conditions), such as water leaks, potential pest entryways, plants too close to buildings, and poor sanitation practices, or must submit work orders to solve pest conducive conditions.
	+ Work with, communicate, and/or educate administration, faculty, staff and students concerning IPM issues when pest issues need resolving.
	+ Should report pest issues to School IPM Coordinator whenever pests or signs of pest activity are discovered in the school building, or are a problem on school grounds and can’t be dealt with by the Site IPM Coordinator.
	+ Should always contact the IPM Coordinator for approval if they believe a pesticide is necessary as part of an IPM-based strategy to manage a pest.

###### IPM Committee

The IPM Committee will assist the IPM Coordinator in developing and implementing the IPM program, resolving pest-related issues and educating stakeholders. YOUR School District will maintain an IPM or other safety-related committee with responsibility to meet annually or biannually to review the IPM program. Minutes will be taken of committee meetings and kept on file by the IPM Coordinator or designee.

The IPM Committee should be composed of one person from each critical position within the YOUR School District:

* IPM Coordinator
* Buildings
* Grounds
* Custodial
* Maintenance
* Nursing
* Nutrition/Food
* Faculty
* Administration
* Parent

###### Administration

The IPM policy, plan and program will be adopted, supported and promoted by district administration.

Specific roles of administration:

* Understand state laws pertaining to IPM in schools (R392-200-7(12)).
* Adopt a district IPM policy and IPM plan.
* Appoint an IPM Coordinator and ensure that language for the IPM Coordinator position is included in that person’s job description for future hires.
* Require faculty, staff, administrators and students to participate in/adhere to the IPM program.
* Communicate with the IPM Coordinator regarding IPM decisions and priorities.
* Support the IPM Coordinator and Site Coordinators in dealing with faculty and staff whose habits, improperly stored food, furniture, etc. are attracting and/or harboring pests, creating pest management issues.
* Establish partnerships with IPM experts (Utah State University, eXtension, PMP’s, State Lead Agency, and non-government organizations such as the IPM Institute).
* Keep office and common spaces free of excessive clutter, food or food scraps, and other pest conducive conditions.

###### Maintenance / Custodial / Grounds

­­­­Members of the Maintenance, Custodial, and Buildings and Grounds departments are the primary drivers of this IPM program. Buildings will be kept clean and in good repair, and the grounds will be properly cared for.

Specific roles include:

* Receive yearly IPM training provided by the IPM Coordinator or qualified supervisor on IPM principles and practices. Training/education will teach, and remind all members, new and experienced, of the IPM Policy/Plan/Program, their specific roles and how to conduct their jobs to assure the IPM program operates efficiently and effectively.
* Indoor Maintenance and Custodial Staff must learn about the pest monitoring program and the monitoring devices in place throughout the school when hired and annually thereafter.
* Grounds, maintenance and custodial staff will be adequately trained to recognize and prevent pest problems, mitigate pest-conducive conditions and follow IPM principles.
* Staff are responsible for recognizing and correcting/reporting pest-conducive conditions, such as water leaks, potential pest entryways, broken door sweeps, torn screens, broken window seals, holes in walls/next to pipes, improperly stored food, plants too close to buildings, poor sanitation practices, etc.
* Maintenance and Custodial staff should maintain the cleanliness of and take care of the school building and grounds.
* Report pest issues to the School IPM Coordinator or Site IPM Coordinator whenever pests or signs of pest activity are discovered in the school building, or are a problem on school grounds.
* If landscaping or turf maintenance is required by their duties, grounds maintenance staff will be trained in accepted horticultural practices grounded in IPM by the IPM Coordinator or his/her designee.
* Manage specific pest issue(s) in coordination with and as directed by the IPM Coordinator. This should not include pesticide application unless the individual is licensed, or is a licensed Pest Management Professional.
* Maintenance staff with certified applicator’s licenses may be responsible for pesticide applications. Before applying pesticides, licensed staff should submit any pesticide-use proposals to the IPM Coordinator for review.

###### Nutrition/Kitchen Staff

Members of the nutrition and kitchen staff are on the front line of the IPM program. Pests of health concern (cockroaches; mice; ants) are frequently encountered in areas with food and for this reason it is required that nutrition and kitchen staff are trained yearly on IPM principles and practices.

Specific roles of Nutrition and Kitchen staff:

* Receive yearly training (or when hired) by the IPM Coordinator, Nutrition/Food Director or designated supervisor on basic IPM principles and practices, their roles in the IPM program and concerning the pest monitoring program in place in the kitchen, food prep and food storage areas.
* Understand that food handling and preparation areas are among the most pest vulnerable areas, and that safe food preparation requires a good understanding of IPM.
* Understand the importance of proper sanitation and proper food storage and how to properly clean up and store food.
* Keep all food, food prep and food storage areas free of crumbs and food residue after use, especially in corners or behind unmovable equipment.
* Will not store cardboard boxes on the premises. Food that is quickly turned-over may be stored in the cardboard boxes in which they were packaged, but the cardboard must be disposed of immediately after the food is gone. Boxes should not be stored or used for long-term storage.
* Inspect arriving shipments for the presence of pests (cockroaches and mice).
* Will not prop doors and windows open unless there is an adequate screen door or screen to prevent the entry of pests.
* Kitchen staff should inspect the kitchen once a month for pests, pest signs (nesting materials, adults/immatures/eggs, feces, damage, etc.) and pest-conducive conditions.
* Kitchen/Nutrition staff will submit pest sightings to the Site IPM Coordinator whenever pests are detected in, or immediately outside of the kitchen and food service areas.
* Can manage specific pest problem(s) as directed by the IPM Coordinator or Site IPM Coordinator.

###### Nursing

IPM focuses heavily on preventing and mitigating pests of human health concern, therefore the nursing staff will play a critical role in the IPM program.

Specific roles of Nurses:

* Maintain copies or have access to safety data sheets (SDS) for all chemicals used on school property or that are listed in the approved pesticides list.
* Be familiar with the signs and symptoms of pesticide poisoning.
* Be aware of any children or staff with asthma or chemical sensitivities.
* Serve as a resource for IPM information on health-related pests for school staff, children and parents.
* Keep an inventory of students with asthma or hypersensitivities to pesticides, chemicals, honey bees or other pests, etc.
* Maintain easy access to Poison Control Center hotline number in case acute poisoning is suspected.
* Monitor for headlice, bed bugs, cockroaches and other pests of human health concern.
* Educate parents and staff about preventing headlice, bed bug and cockroach spread when it occurs.
* Submit pest sightings to the Site IPM Coordinator whenever pests are detected in the health suite/Nurse’s office.

###### Students/ Faculty / Staff

As the primary occupants of YOUR School District buildings, students, faculty and staff play a major role in the success of the IPM program. These groups will be encouraged by the Administration to complete the details of their IPM roles and to cooperate with the IPM Coordinator or Site IPM Coordinator when dealing with pest management or IPM issues.

Specific roles of faculty, staff and students:

* Receive training on their specific roles in the IPM program by the IPM Coordinator or designated supervisor once a year.
* Properly make pest complaints/report pests in a timely fashion.
* Will not leave food in lockers, classrooms, or common areas and will avoid eating food or drinking soft drinks in areas other than areas designated for food consumption, or will immediately clean all food, food particles and packaging, etc., that fall on desks, floors, chairs, etc. when eating in a non-authorized area.
* Minimize clutter in rooms, lockers, office spaces, lounges, etc.
* Store all food in pest proof containers.
* Practice good sanitation and be responsible environmental custodians.
* Shall not bring pesticides on YOUR School District property, use or store pesticides, and understand that **only** the IPM Coordinator or his/her designee may apply an approved pesticide on district property.
* Will be aware of the pest-monitoring program and will not move or tamper with sticky traps or other pest-monitoring devices.
* Will report any evidence of pest activity or pest-conducive conditions to the IPM Coordinator or Site IPM Coordinator.

###### Parents

Parents have a minor, but important role in the IPM program.

Specific roles of the Parents:

* Understanding that there is an IPM program in place and what that means.
* Make their children aware of their role in the School IPM Program at the school.
* Encourage children to lend a hand in cleaning up.
* Talk to their children about not storing food in their lockers and desks.
* Learn about IPM practices and follow them at home so that pests are not carried to school in notebooks, lunch boxes, backpacks, clothing or the children's hair.
* Use IPM practices in their homes to extend the benefits of IPM.
* Review the ‘Annual School IPM Program Notification Letter to Parents & Staff’ as well as all notices of application of pesticides at the school.
* For questions or concerns, parents and /or guardians will contact the School IPM Coordinator

###### Service Providers

YOUR School District service providers including sanitation, refuse disposal (dumpsters), food delivery, pest control, landscape maintenance, etc. will be guided by written and signed contracts developed by the YOUR School District, developed with IPM program specifications in mind.

The district should notify (in writing) all pest control, construction, and landscape contractors of the need to adhere to the district’s IPM policy and plan in any pest control, planning, new construction, repair, or maintenance work for the district

Service providers should expect:

* Districts may administer penalties for not complying with the district’s IPM policy.
* Duties of vendors and contractors in the School IPM Program will be prescribed in specific language in the bid specifications and contracts
* YOUR School District to enforce good sanitation practices of service providers by including specific language in bid specifications and contracts.
* Contracts that specify regular maintenance, to include or coincide with cleaning under and behind machines during service visits (if appropriate)
* Resolving issues or problems that may support pests, such as fixing or eliminating leaks or harborage areas, should be prioritized.

###### Contracted Pest Management Professional

Most pest issues can be managed by the IPM Coordinator or Site IPM Coordinator using non-chemical techniques. Occasionally, certain pest situations will occur where a professional must be contracted to handle the pest issue. YOUR School District will create a contract that will meet the requirements of the District’s school IPM policy and plan. More detail concerning pest management professional contracts can be found in Appendix P.

Any pest management professional working with the YOUR School District, shall:

* Be made aware of YOUR School District’s IPM plan and program.
* Will make accommodations in-line with the YOUR School District’s school IPM policy and plan.
* Will **not** apply pesticide without consulting with the IPM Coordinator prior to **any** pesticide application.
* Will **not** make routine, time or calendar-based pesticide applications.
* Will avoid the use of broadcast applications in favor of spot treatments, when/where needed.
* Will set procedures for timely response to pest sightings.
* Will schedule regular **inspections** of pest vulnerable areas, rather than making pesticide applications.
* Will keep detailed records of pest sightings (if designated with this task) and pesticide use, and will give a copy of those records to the IPM Coordinator and Site IPM Coordinator for their recordkeeping.
* Will provide safety data sheet (SDS) documents to the Site IPM Coordinator and IPM Coordinator of any product the company wants to apply.
* Will only apply pesticides that the IPM Coordinator and the contractor have agreed upon in advance and that are listed in the Approved Pesticides List.
* Will give specific recommendations to correct pest-conducive conditions.
* Will facilitate proper posting and notification.
* Will promote the appropriate least-hazardous methods to correct pest problems.
* All applicators should be properly licensed and supervised by knowledgeable, trained personnel.

### EDUCATION & TRAINING

Education is the backbone of the YOUR School District’s IPM program. Through education of district employees, everyone can do a little to pitch in to help prevent pests. In this way, the burden of the IPM program is disseminated amongst all stakeholders, no matter how minor their role.

All YOUR School District administration, faculty and staff will be provided with information on the IPM policy/program at hire and during annual update training. Training will include the rationale for the IPM policy and program and specific elements including use of the pest-sighting log and prohibition on pesticide applications by unauthorized individuals, and how to fulfill their specific role in the program.

Additionally, designated staff including the IPM Coordinator, IPM Site Coordinators and those who conduct regular inspections of facilities (Custodial, Maintenance/Buildings, and Grounds) will receive advanced training on identifying pest infestations and pest-conducive conditions. This training will improve the ability of staff to oversee service providers and staff compliance with the YOUR School District’s IPM policy and plan.

YOUR school district will utilize online training modules provided by StopSchoolPests, which includes modules for all stakeholder groups within a school community, or will create new training materials that target all stakeholder groups. The StopSchoolPests school IPM training modules are located here:

<http://articles.extension.org/pages/73468/self-paced-learning-page-for-urban-ipm>

Additional educational resources will be sourced from iSchoolPestManager, located here:

<http://ischoolpestmanager.org/>.

Below is list of the IPM stakeholders in the YOUR School District and a description of the type of education and training each will receive.

###### IPM Coordinator

The IPM Coordinator, in conjunction with members of the IPM Committee, are responsible for developing, organizing and implementing the educational and training portions of the IPM program. The IPM Coordinator is expected to understand the principles and practices of IPM, and the district’s IPM program in order to teach other stakeholders their roles.

In order to attain the knowledge necessary to successfully run the YOUR School District’s IPM program, the IPM Coordinator and his/her designees will be required to attend school IPM-related educational workshops and training sessions. The IPM Coordinator and his/her team must be knowledgeable in the IPM topics below to teach others in the district about them and what their roles are. The IPM Coordinator, in addition to those directly assisting with running the IPM program should be well educated in the following IPM areas:

* The YOUR School District’s IPM policy and plan.
* Integrated Pest Management principles and practices.
	+ Education will be attained through attending School IPM training opportunities, self-study and on-the-job experience.
	+ Education attained by inviting Utah State University to assist with IPM training.
	+ The IPM Coordinator should create a library of resources at the district that can assist him/her in managing pests. Some suggested references include:
		- [IPM in Sensitive Environments](http://pestfiles.unl.edu/2012%20IPM%20Manual.pdf)
		- Common Pests of Schools and Structures in Utah
		- [The Mallis Handbook of Pest Control](http://www.amazon.com/Mallis-Handbook-Pest-Control-Edition/dp/1890561029)
		- [NPMA Field Guide to Structural Pests - Second Edition](http://npmapestworld.org/bugstore/index.cfm?uIDP=83&Trg=3)
		- [PCT: Bird Management Field Guide](http://store.giemedia.com/en/bird-management-field-guide)
		- [PCT Field Guide for the Management of Structure-Infesting Ants 3rd Ed.](http://store.giemedia.com/en/pct-field-guide-for-the-management-of-structure-infesting-ants-3rd-ed)
		- [PCT Field Guide For The Management of Structure-Infesting Flies](http://store.giemedia.com/en/pct-field-guide-for-the-management-of-structure-infesting-flies)
		- [PCT Field Guide for the Management of Urban Spiders, 2nd Ed.](http://store.giemedia.com/en/pct-field-guide-for-the-management-of-urban-spiders-2nd-ed)
		- [PCT Field Guide-Mgmt of Structure-Infesting Beetles-Vol I: Hide & Carpet/Woodboring Beetles](http://store.giemedia.com/en/pct-field-guide-mgmt-of-structure-infesting-beetles-vol-ihide-carpet)
		- [Rodent Control: A Practical Guide for Pest Mgmt Professionals](http://store.giemedia.com/en/rodent-control-a-practical-guide-for-pest-mgmt-professionals)
		- [Turfgrass Ecology & Management](http://store.giemedia.com/en/turfgrass-ecology-management)
* IPM-based pest management contracts.
* How and why to monitor for pests in buildings and grounds.
* Pest identification.
* Recognition of pest damage, signs, and pest-conducive conditions and pest vulnerable areas.
* Common maintenance issues that can lead to pest issues and how to correct them.
* IPM program record keeping.
* Pest management action levels.
* Pest management techniques.
* Pesticide and pesticide use basics.
	+ Education could be enhanced by attaining a non-commercial state pesticide applicator’s license through the Utah Department of Agriculture and Food.
* Pest management implications for planning new construction or site modifications.
	+ [Education can be gained by reading this document.](http://utahpests.usu.edu/schoolIPM/files/uploads/School_IPM_Documents/IPM_Design_and_Construction/Pest_Prevention_By_Design.pdf)

###### Site IPM Coordinator (Head Custodian)

The site IPM Coordinators will be trained to understand and manage the day-to-day IPM program activities at the building/school level. Over time, the Site Coordinator will gain proficiency in all areas listed below. The IPM Coordinator, or his/her designee, should develop and provide education and training for the Site IPM Coordinators.

Upon completion of the program, Site IPM Coordinators/Head Custodians will be tested to demonstrate they have a minimum level of proficiency. Certificates of completion will be given to Site IPM Coordinators/Head Custodians that successfully complete the educational program and exam. The Site IPM Coordinator should understand the following areas well enough to train their cleaning staff while on-the-job.

* Understanding the YOUR School District’s IPM policy and program.
* Basic understanding of IPM principles and practices.
* Recognition and mitigation of pest-conducive conditions.
* Basic identification of common pests.
* Basic biology of common pests.
* Sanitation and maintenance practices for minimizing pest food, shelter, water and pest access to buildings.
* Basic non-chemical strategies for managing common pests (i.e., exclusion, sanitation, education, maintenance, cultural practices and physical strategies)
* How to monitor for pests and collect pest-monitoring data.
* How to communicate with the IPM Coordinator.
* How to report pests to the IPM Coordinator.
* How to deal with pest complaints/reports.
* How to submit IPM-/pest management-related work orders.
* How to communicate/interact with administration, faculty and staff concerning pest management issues.
* Basic recordkeeping.
* Basic understanding of pesticide hazards and the district’s pesticide-use rules.
* Basic understanding and maintenance of Safety Data Sheets.
* How and why an IPM binder of important IPM information will be kept in the Site Coordinator’s office and readily available for inspection by Local Health Officials or the IPM Coordinator.

###### IPM Committee

The IPM Committee should be educated on the following topics so that they can assist the IPM Coordinator in making appropriate IPM decisions. The IPM Committee can be trained on the topics listed below, in person, upon the committee’s initial formation and for new committee members, as they are added/replaced. General maintenance education of the areas below can be maintained via written short communications or in-person training, as deemed necessary by the IPM Coordinator.

* The YOUR School District’s IPM policy and program.
* Why IPM is used and its importance in minimizing pesticide exposure.
* Basic understanding IPM principles and practices.
* How to communicate with the IPM Coordinator.
* How to report pests to the IPM Coordinator.
* How to communicate/interact with administration, faculty and staff concerning pest management issues.

###### Administration

An IPM program cannot be successfully administered unless it is supported by district administration. In the YOUR School District, members of Administration will have a basic understanding of IPM and the district’s IPM policy and plan so that they can advocate for participation by other administrators, faculty, staff, students and parents. Areas that administrators need to receive education are listed below. The education can be in the form of face-to-face communication or via a written short communication distributed on a yearly basis.

* Utah Administrative Code R392-200-7(12): The School Rule.
* The YOUR School District’s IPM policy and program.
* Why IPM is important to the members of the school community.
* Very basic understanding IPM principles and practices.
* How to communicate with the IPM Coordinator.
* Why they need to support the IPM Coordinator and Site IPM Coordinators in their IPM efforts.

###### Maintenance

­­­­Members of the maintenance department are a critical part of the IPM team, especially pertaining to conducting pest exclusion. Maintenance employees will receive yearly training on the following topics below in an in-person format. Training for maintenance personnel could be grouped with Custodial.

* Understanding the YOUR School District’s IPM policy and program.
* Basic understanding IPM principles and practices.
* Recognition and mitigation of pest-conducive conditions.
* How to properly exclude pests from buildings: techniques, materials and methods.
* How to communicate with the IPM Coordinator.
* How to report pests to the IPM Coordinator.
* How to deal with pest complaints/reports.
* How to process and handle IPM-/pest management-related work orders.
* How to communicate/interact with administration, faculty and staff concerning pest management issues.

###### Grounds

­­­­Members of the Grounds department are the primary drivers of the IPM program outdoors, keeping ornamental, play and turf areas safe and well cared for. If turf management is provided by the City or outside contractor, they will be made aware of the District’s IPM Policy and Plan and will adhere to the District’s IPM program. Grounds employees will receive annual training provided by the IPM Coordinator or his/her designee on the topics listed below.

* Understanding the YOUR School District’s IPM policy and program.
* Basic understanding of IPM principles and practices.
* How to monitor for pest issues (weeds, vertebrates, in vertebrates and abiotic issues) in outdoor areas, play areas, ornamental plantings and turfgrass.
* Recognition and mitigation of pest-conducive conditions in ornamental plantings, play areas and turfgrass.
* Weed, vertebrate and invertebrate pest management in turf, emphasizing the use of IPM-based techniques.
* How to communicate with the IPM Coordinator.
* How to report pests to the IPM Coordinator.
* How to deal with pest complaints/reports.
* How to process and handle IPM-/pest management-related work orders.
* How to communicate/interact with administration, faculty, staff and parents concerning outdoor pest management issues.
* Practice all outdoor sanitation and maintenance techniques.
* Will be encouraged to earn a pesticide applicator license from the Utah Department of Agriculture and Food.
* Before applying pesticides, licensed staff should submit any pesticide-use proposals to the IPM Coordinator for review.

###### Nutrition/Kitchen Staff

Members of the nutrition and kitchen staff are on the front line of the IPM program. Pests of health concern (cockroaches; mice; ants; flies) are frequently encountered in areas with food and for this reason it is required that nutrition and kitchen staff are trained yearly on IPM principles and practices. The IPM Coordinator, Nutrition/Food Director or designated supervisor, will train nutrition and kitchen staff. Nutrition/Kitchen staff will be trained on the following topics:

* YOUR School District’s IPM policy and program.
* IPM principles and practices.
* Communicating with the IPM Coordinator.
* Pest reporting procedures.
* Dealing with pest complaints/reports.
* Communication with administration, faculty, staff and parents concerning pest management issues.
* Pest monitoring and the use of pest monitors.
* Recognition and mitigation of pest-conducive conditions in food storage, preparation, serving and garbage areas.
* Understanding non-chemical, IPM-based techniques that can help prevent pest infestations.
* Importance of good sanitation and proper food storage and how to properly clean and store food.
* Keep all food areas free of crumbs and food residue after use, especially in corners or behind unmovable kitchen equipment.
* Understanding that they should not store cardboard boxes on the premises. Food that is quickly turned-over may be stored in the cardboard boxes in which they were packaged, but must be disposed immediately after the food is gone. Boxes should not be stored or used for long-term storage.
* Inspection of arriving shipments for the presence of pests (cockroaches and mice).
* Understanding that propping-open doors and windows without an adequate screen door or screen to prevent the entry of pests is unacceptable behavior.
* Understanding of how to conduct a basic inspection of the kitchen once a month for pests and pest-conducive conditions.
* Should manage specific pest problem(s) as directed by the IPM Coordinator or Site IPM Coordinator.

###### Nursing

Because IPM focuses heavily on preventing and mitigating pests of human health concerned, the nursing staff can play a critical role in the IPM program. Nurses in the YOUR School District will receive annual basic IPM training provided by the IPM Coordinator or his/her designee on the following topics:

* YOUR School District’s IPM policy and program.
* IPM principles and practices.
* Communication with the IPM Coordinator.
* Pest reporting procedures.
* How to deal with children who are experiencing pest issues (lice, bed bugs, roaches, etc.).
* How to communicate/interact with administration, faculty, staff and parents concerning pests of health concern.
* The District’s Bed Bug Action Plan.
* Pest monitoring and the use of pest monitors.
* How to maintain copies or have access to safety data sheets (SDS) for all chemicals used on school property.
* How to get information on pesticide and pesticide poisonings.
* Awareness of children or staff with asthma or chemical sensitivities.
* Awareness of students with hypersensitivities to honey bees, etc.
* Monitoring for head lice.
* Educating parents and staff about preventing the spread of head lice, bed bugs or other pests of health concern when they are detected.

###### Students/Faculty/Staff

As the primary occupants of YOUR School District buildings, students, faculty and staff play a major role in the success of the IPM program. These groups will be encouraged by the Administration to complete the details of their IPM roles and to cooperate with the IPM Coordinator or Site IPM Coordinator when dealing with pest management or IPM issues. These groups will be trained annually by the IPM Coordinator or his/her designee on the following topics:

* YOUR School District’s IPM policy and program.
* Why IPM is needed.
* Very basic IPM principles and practices.
* Who is the IPM Coordinator and what their roles are.
* How to report pests.
* What pest monitoring is and why pest monitors are being placed in their rooms.
* Avoid leaving food in lockers, classrooms, and common areas and avoid eating food or drinking
* soft drinks in areas other than areas designated for food consumption.
* Minimizing clutter in rooms, lockers, office spaces, lounges, etc.
* How to properly store food.
* Pesticide use: will NOT be permitted by anyone other than the IPM Coordinator or his/her designee.

###### Parents

Parents have a minor, but important role in the IPM program. Parents will be contacted at the beginning of every school year by the YOUR School District with a letter informing them of the IPM program, what it is, and their basic roles. An example letter can be found in Appendix Q.

###### Service Providers

YOUR School District service providers including sanitation, refuse disposal (dumpsters), food delivery, pest control, landscape maintenance, etc. will be guided by written and signed contracts developed by the YOUR School District developed with IPM program specifications in mind.

The district should notify (in writing) all pest control, construction, and landscape contractors of the need to adhere to the district’s IPM policy in any pest control, planning, new construction, repair, or maintenance work for the district.

The IPM Coordinator or his/her designee will contact service providers to educate them about YOUR School District’s IPM Policy and Plan, as needed. Vendors/contractors should be aware that:

* YOUR School District will enforce good sanitation practices of service providers by including specific language in bid specifications and contracts.
* Contracts will specify regular maintenance, to include or coincide with cleaning under and behind machines during service visits (if appropriate)
* Resolving issues or problems that may support pests, such as fixing or eliminating leaks or harborage areas, should be prioritized.
* YOUR School District may administer penalties for not complying with the district’s IPM policy.
* Duties of vendors and contractors in the School IPM Program to be prescribed in specific language in their bid specifications and contracts, such as:
* Contracts will specify regular maintenance service, cleaning under and behind machines during service visits, etc.
* Immediate correction of problems, which may foster pests (for example, breakage, leaks, or excessive condensation from machinery).

###### Contracted Pest Management Professional

The IPM Coordinator or his/her designee will work with the contracted pest management professional to assure that they are providing IPM-based services. Contracted work by a pest management professional in the YOUR School District will involve an IPM-based contract. More information on creating contracts with pest management professionals can be found in Appendix P.

### PEST REPORTING PROCEDURES

Every person in the YOUR School District has the responsibility of reporting pests so that pests may be managed. The following outlines the procedures for pest reporting in the YOUR School District. Ultimately, all pest reports should reach the IPM Coordinator and he/she will determine what action steps will be taken and whether or not a contracted pest management professional is required to resolve the pest issue. Both Site Coordinators and the IPM Coordinator will record all pest complaints and action steps taken to resolve the issue. The pest reporting/sighting/log form can be found in Appendix R.

Student/Parent

Teacher/staff

Administrator

Site IPM Coordinator/

Head Custodian

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IPM Coordinator

District employees who will be involved in resolving the pest issue

Pest Management Professional

### PEST IDENTIFICATION PROCEDURES

Pest identification is of primary importance before developing a management strategy. Each pest species will be treated differently depending on its biology, life cycle, know chemical resistance, etc. Pest will be identified using the resources listed in “IPM Coordinator Role” section above and with assistance from USU Extension. Additionally, pest identification will be done using USU’s online or print structural pest guide, which can be found here: <https://utahpests.usu.edu/schoolIPM/htm/pest-id-guide/>.

### PEST CONTROL PROCEDURES

This section outlines procedures for determining IPM action steps in addition to a description of the available control procedures. Pest management strategies will include a combination of education, exclusion, sanitation, maintenance, cultural, biological and mechanical controls, and pre-approved, site-appropriate pesticides only when necessary. Detailed pest management strategies for specific pests are outlined in Appendix B – O, and additional information on control procedures can be found in Appendix S.

###### Procedures for determining course of action

* Identify the pest.
* Estimate the population/size of the pest(s).
* Determine if populations size exceeds threshold action levels.
* Use pest biology and site information to determine the appropriate control practices to be used from the “Control Practices” list. The pest-specific action plans should also be used to help develop a response plan that is specific to the pest identified in step 1.
* Assess and evaluate the success of the control strategies used in this particular situation on this particular pest. Were they effective? Alter the plan and the way management is approached for this particular pest to improve management on the next occurrence. Pest-specific plans will be altered to meet site- and situation-specific situations/needs.
* Keep records of the pest sighting, the pest monitoring/population inspection, the threshold used, the control measures taken and how they were used, man hours, etc.

###### Criteria for Selecting Treatment Strategies

Once monitoring indicates a pest treatment is needed, the choice of specific strategies will be made. Strategies will be chosen that:

* Minimize risk to humans and the environment.
* Are least disruptive of natural controls in landscape situations.
* Are least toxic to non-target organisms.
* Prevent recurrence of the pest problem.
* Easiest to carry out safely and effectively.
* Most cost-effective in the short- and long-term.
* Appropriate to the site and maintenance system.

###### Pest Control Options

The following is a list of general categories of treatment strategies. The list is not intended to be exhaustive since pest management techniques and products change, new ones are discovered or invented, and ingenious pest managers develop new solutions to old problems every day.

Education

* Education is a cost-effective pest management strategy. Information will be provided by the IPM Coordinator, when needed, that will help change people's behaviors -- particularly how they dispose of wastes and store food. Education can also increase people's willingness to tolerate innocuous pests so they are less likely to request toxic control measures. A detailed description of the YOUR School District’s IPM Education plan can be found above in the “Education & Training” section.

Habitat Modification

* Pests need food, water, and shelter to survive. Elimination or reduction, even of one of these requirements, will help create an inhospitable environment for pests. Habitat modification will be used whenever possible to help deter pest presence. Habitat modification often includes decreasing humidity, selecting the proper shelving, reducing clutter, removing access to food, reducing moisture from leaks, etc.

Sanitation

* Improved sanitation and cleaning procedures can reduce or eliminate food for pests such as rodents, ants, cockroaches, flies, and yellow jackets. Those with any role in sanitation will be trained to clean with pests in mind. Instruction will be given on how and where to clean to best prevent pest infestations.

Eliminating Water Sources for Pests

* This involves fixing leaks, keeping surfaces dry overnight and eliminating standing water.

Eliminating Pest Habitat

* How this is done will vary by pest, but some examples include caulking cracks and crevices to eliminate cockroach and flea harborage, removing clutter that provides roach habitat, and removing dense vegetation near buildings to eliminate rodent harborage.

Modification of Personal Habits

* Many administrators, faculty, staff and children improperly store food or snacks, create clutter and waste, prop doors and windows open, improperly store pet food, maintain potted plants in offices or classrooms, have furniture, etc. If these habits, or any unlisted habits, are perpetuating and supporting a pest population, the IPM Coordinator will have to educate the involved party(s) as to why and how they have to change their habits.
* **Modification of personal habits requested on behalf of the IPM Coordinator will be backed by administration.**

Modification of Horticultural Practices

* Planting techniques, irrigation, fertilization, pruning, and mowing can all affect how well plants grow. A great many of the problems encountered in school landscapes are attributable to using the wrong plants and/or failing to give them proper care. Healthy plants are often likely to have fewer insect, mite, and disease problems. It is very important that the person responsible for the school landscaping have a good foundation of knowledge about the care required by the particular plants at the school or be willing to learn.

Design or Redesign of Landscape Plantings

* The proper plants will be chosen to meet the specifications of the planting site. Plants will be selected that are suitable for northern Utah, Utah’s soils, have minimal pest issues and that are low-maintenance. Plants and ground covers that provide harborage or habitat for pests, especially rodent pests, will not be used in the future. Landscape plantings will be diversified. A list of suitable plants will be developed and used by the Grounds department.

Reduced-Input Turf Management

* To reduce the reliance on herbicides, synthetic fertilizers and insecticides/fungicides to maintain healthy turfgrass areas, emphasis will be given to non-chemical techniques including: altering the intensity of management based on turf use requirements (e.g., sports field versus an ornamental section of turf in back or on the side of a building), soil testing, proper irrigation scheduling, monitoring for weeds and insect pests, intense cultivation practices (e.g., core aeration to reduce compaction), overseeding, topdressing, proper mowing height, etc.

Physical Controls

***Vacuuming***:

* A heavy-duty vacuum with a special filter fine enough to screen out insect effluvia (one that filters out particles down to 0.3 microns) will be used not only for cleaning, but also for directly controlling pests. A vacuum can be used for most nuisance pests and on some pests of health concern. Vacuuming is a quick, non-chemical approach to dealing with most minor pest incursions.

***Trapping***:

* Traps play an important role in non-toxic pest control; however, in and around schools, traps may be disturbed or destroyed by students who discover them. To prevent this, traps will be placed in areas out of reach of the students in closets, locked cupboards, etc. More on traps can be found in the “Pest Monitoring Procedures” section below.

***Removing Pests by Hand***:

* In some situations removing pests by hand will be the safest and most economical strategy.

Biological Controls

* Conserving biological controls means protecting those already present in the school landscape. To conserve natural enemies outdoors, the following will be done:
	+ Treat only if injury levels will be exceeded.
	+ Spot treat to reduce impact on non-target organisms. Treatments will be timed to be least disruptive in the life cycles of the natural enemies. Select the most species-specific, least-damaging pesticide materials, such as *Bacillus thuringiensis*, insect growth regulators that are specific to the pest insect, and baits formulated to be attractive primarily to the target pest, as examples.

No Action Alternative

* If the reported pest is not a pest of health concern or is occurring in numbers less than the developed thresholds, then no action can be taken. This is called pest tolerance and tolerance will be increased by educating faculty and staff about pests of health concern and those that are simply nuisance pests or random, occasional invaders.

Pesticides

When pesticides are deemed a necessary part of the IPM strategy for dealing with a particular pest, the least hazardous chemical and formulation will be selected. A more detailed section on pesticide selection and use can be found below.

Decisions concerning whether or not pesticides should be applied in a given situation will be based on a review of all available IPM options. Efforts will be made to avoid the use of pesticides by employing non-chemical IPM-based strategies first.

When it is determined that a pesticide must be used in order to meet pest management objectives, the least-hazardous material, adequate for the job, will be chosen.

* No person shall apply, store, or dispose of any pesticide on YOUR School District managed properties without an appropriate pesticide applicator license or approval by the IPM Coordinator.
* All pesticide applicators will be trained in the principles and practices of IPM and the use of pesticides approved for use by YOUR School District.
* All applicators must comply with the IPM policy and follow appropriate regulations and label precautions when using pesticides in or around YOUR School District facilities.
* Pest-specific strategies will be included in the IPM program specifications/contract provided to each service provider.

### PEST MONITORING PROCEDURES

Pest monitoring is the backbone of the YOUR School District’s IPM. Pest monitoring will allow the Site and IPM Coordinator to assess the types and numbers of pests in and around buildings. Pest Vulnerable Areas (PVAs) (areas that favor pest establishment and success, usually areas with food, water, shelter, heat and access) will be assessed during initial building inspections and using building floor plans. Each building in the district will have an active pest monitoring plan with traps placed in PVAs as determined during the inspection or by the IPM or Site IPM Coordinator.

###### Pest Monitor Placement and Maintenance

Monitors will be placed properly in Pest Vulnerable Areas (PVAs), and the appropriate data will be recorded. Each trap will be given a unique identifying number that will be recorded on the monitoring form data sheet. The traps will be folded as per the trap design purchased, and placed along baseboards, in corners behind objects and in other PVAs. It is critical that the traps are placed flush against the baseboard or wall to maximize trap catch. Trap locations will be marked on a building map, so that anyone can find traps in the future. The marked map will be kept in the Site IPM Coordinator’s IPM binder in his/her office.

Traps will be checked every 4 weeks, or more frequently if monitors are being used as part of a particular pest management project, and pests on the traps will be recorded on the pest monitor data sheet housed in the Site IPM Coordinator’s IPM binder in his/her office. Each time pests are recorded on the datasheet, a mark, using a sharpie marker, will be put next to the pests so that the person who checks the traps in the future will know which pests have already been accounted for.

The IPM Coordinator will assess potential pests of health concern after notification by the Head Custodian or Site IPM Coordinator. Actionable pests will be promptly addressed.

Traps that are old, dirty, or missing will be replaced immediately. To identify pests on/in the monitoring devices, we will follow the “Pest Identification Procedures” listed above. For pests that cannot be confidently identified we will contact the Utah Plant Pest Diagnostic Lab to assist with pest identification (ryan.davis@usu.edu).

###### Pest Management Assessment

Pest monitors will also be used to help assess pest management success. While corrective actions are being taken to mitigate a pest issue, monitors will be used to help determine if pest populations are increasing or declining, which can be a measure of program success, or if the program needs revision for a more effective strategy.

###### Monitor Types

Additional pest monitors may be used for different types of pests and in different situations (e.g., sticky monitors, glue traps, mechanical mouse traps, outside rodent bait stations, rodent bait stations with non-toxic bait blocks for monitoring, insect pheromone traps, flying insect traps, light traps and visual inspections).

Through education, the IPM Coordinator and Site IPM Coordinators should ensure that administration, faculty and staff, especially teachers and kitchen staff, know the purpose of the pest monitors and not to tamper with the monitors.

###### Pest Monitoring Data Collection

The YOUR School District’s monitoring program will record the following data:

* trap number
* date placed
* name of technician(s) who placed monitor
* building, room and location within room where the monitor was placed
* number of sticky traps
* number of mouse traps/monitoring tamper-resistant bait stations
* number of other traps used indoor and outdoors in playgrounds, ornamental plantings, or turf
* identity of pest(s) on trap
* identify life stages on traps (eggs, immatures, adults)
* pest direction (which direction are majority of the insects coming from, if obvious; used typically in a specific pest management situation, such as if a particular, known roach population is being monitored)
* increase or decrease in trap catches
* record if a trap was missing, damaged, or old
* record a new trap number to replace those traps

More detailed information on conducting a monitoring program can be found in Appendix T.

###### Thresholds

A key difference between IPM and traditional pest control is that IPM often uses “action thresholds.” An action threshold is the point at which an IPM practitioner takes action to reduce a pest’s numbers. Sometimes an action threshold is a number: five yellow jackets at a trash can, 10 percent feeding damage to a plant, three flies in a classroom. Sometimes it is qualitative: light or no infestation versus heavy infestation. Below the threshold level, the IPM technician does not apply pesticides, set traps or take any other direct control action (although the technician should continue to monitor the pest and the situation). If a pest is at or above the action threshold, the IPM or Site IPM Coordinator will act to control the pest.

[Additional tips for determining thresholds can be found here](http://www.extension.org/pages/20415/school-integrated-pest-management-thresholds#.VEK0wEsipuY).

Action thresholds vary by pest (hornet versus ant), by site (storage room versus infirmary), or by season. For some landscape pests, action thresholds will also vary depending on whether natural enemies are present. In general, pests of health concern have low or zero thresholds, while nuisance pests have a relatively high action threshold.

YOUR School District will adopt standard, pre-developed thresholds for common pests at the onset of the IPM program, but the district, IPM Coordinator and IPM Committee may change thresholds of various pests as needed in the district. Thresholds will be set for all pests (weeds, arthropods, vertebrates, invertebrates, etc.), indoor and outdoor, in the district. Detailed information on pest thresholds and pest action threshold examples can be found in Appendix U.

Setting Thresholds
Five factors will be considered in setting action thresholds in the YOUR School District: economics, health and safety concerns, aesthetic concerns, public opinion, and legal concerns.

***Economics***

* Is the cost of choosing a “No Action Alternative” greater than actively managing the pest?

***Health and Safety Concerns***

* Action thresholds will vary by the pest. Pests of greater health concern (yellowjackets and other stinging arthropods, bed bugs, head lice, mice, cockroaches) will have lower action thresholds, while the common nuisance pests (box elder bugs, elm seed bugs, clover mites, most spiders, ground beetles, root weevils, etc.) will have higher thresholds.

***Aesthetic Concerns***

* Aesthetic damage occurs when the appearance of something is degraded. Aesthetic concerns apply primarily to outdoor plants. Aesthetic thresholds are primarily subjective and should be decided on by the Grounds department in conjunction with the IPM Coordinator.

***Public Opinion***

* Certain pests are seen as more disgusting, scarier, or otherwise worse than other pests. The reasons are complex, and are based on social, cultural, or psychological factors. Education is the primary tool that will be used to combat negative public opinion of nuisance pests. Pest of heath concern, however, should have negative public opinion and action should be taken lower thresholds.

***Legal Concerns***

* Pests in commercial and institutional kitchens are regulated under state and county health codes. There is little tolerance for cockroaches, ants, mice, and other pests anywhere food is stored, prepared, or served, so action thresholds are typically low. Safety and building standards, rather than IPM considerations, may determine when action is necessary to control termites, rats, flies, and other pests in commercial and public areas, including public buildings such as schools. During public health emergencies, government agencies may legally mandate control of certain pests, such as raccoons or skunks during rabies outbreaks, or mosquitoes during encephalitis outbreaks.

### APPROVED PESTICIDES LIST

Globally Harmonized System (GHS)
Starting in June, 2015, all pesticides will follow a new format for labeling. Additionally, MSDS (material safety data sheets) sheets will now be replaced by SDS (safety data sheets) and will also be in a standardized format. This new format of labeling uses pictographs to communicate the hazard potential of each chemical product. These new pictogram categories could help you select products that have reduced acute and long-term/chronic toxicity. The YOUR School District will update all of its Material Safety Data Sheets (MSDS) with the new Safety Data Sheets (SDS). This is an OSHA requirement. [Please see OSHA's video tutorial on the Globally Harmonized System here](https://www.youtube.com/watch?v=RvQNf1Y7E84).

Pesticide SelectionWhen contemplating the use of a pesticide in the YOUR School District, a Safety Data Sheet (SDS) for the compound will be acquired and examined. SDS forms are available from pesticide suppliers and online, and contain some information on potential hazards and safety precautions. The pesticide-use list can be found in Appendix V, and will be updated annually. The following criteria will be used when selecting pesticide: safety, species specificity, effectiveness, endurance, speed, repellency and cost.

SafetyThis means safety for humans (especially children), pets, livestock, and wildlife, as well as safety for the overall environment. Questions that will be asked of a product, include:

* What is the acute (immediate) and chronic (long-term) toxicity of the pesticide? Acute toxicity is measured by the "LD-50" which is the lethal dose of the pesticide required to kill 50% of the test animals (measured in milligrams of pesticide per kilogram of body weight of the test animal). The higher the LD-50, value, the more poison it takes to kill the target animals and the less toxic the pesticide. In other words, high LD-50 = low toxicity. Chronic toxicity refers to potential health effects from exposure to low doses of the pesticide for long periods of time. Chronic effects can be carcinogenic (cancer-causing), mutagenic (causing genetic changes), or teratogenic (causing birth defects).
* How mobile is the pesticide? Is the compound volatile, so that it moves into the air breathed by people in the building? Can it move through the soil into the groundwater? Does it run off in rainwater to contaminate creeks and rivers?
* What is the residual life of the pesticide?
* How long does the compound remain toxic in the environment?
* What are the environmental hazards listed on the label?
* What are the potential effects on wildlife, beneficial insects, fish, or other animals?

Species Specificity

* + The best pesticides are species specific; that is, they affect just the group of organisms you are trying to suppress. YOUR School District will avoid broad-spectrum materials in favor of selective pesticides, when possible. When broad-spectrum materials must be used, however, they will be applied in a selective way such as spot-treating.

Speed

* + A quick-acting, short-lived, more acutely-toxic material might be necessary in emergencies; a slow-acting, longer-lasting, less-toxic material might be preferable for a chronic pest problem. An example of the latter is using slower-acting boric acid for cockroach control.

Repellency

* + Does the pesticide repel certain pests like cockroaches or bed bugs, or can bugs walk on top of it and not be repelled?

Resistance (endurance)

* + Is there known resistance among an insect species to the pesticide you are thinking of using. Research the active ingredient (not the product name) or group of pesticides and determine if there is reported resistance.

Cost

* + This is usually measured as cost per volume of active ingredient used. Some of the newer, less-toxic microbial and botanical insecticides and insect growth regulators may appear to be more expensive than some older, more toxic pesticides. But the newer materials tend to be effective in far smaller doses than the older materials. This factor, together with their lower impact on the environment, often makes these newer materials more cost effective.

Least-Toxic Chemical Controls

* + The health of school residents and long-term suppression of pests must be the primary objectives that guide pest control in school settings. To accomplish these objectives an IPM program must always look for alternatives first and use pesticides only as a last resort. There are many chemical products to choose from that are relatively benign to the larger environment and at the same time effective against target pests. The least toxic chemical needed for management will always be selected over more toxic products.

PESTICIDE USE PROCEDURES

Non-chemical pest management methods will be used whenever possible to provide the desired control. Cost or staffing considerations alone are not adequate justification for use of chemical control agents. ALL pesticide applications must be approved by the IPM Coordinator in advance, and the products used must be listed on the approved pesticide list. Antimicrobial agents, containerized ant bait stations, and **non-toxic** rodenticide bait blocks (used for monitoring) applied in tamper-proof bait stations, are exempt from approval. Non-exempt pesticides will be applied only when target buildings or grounds are unoccupied and only with the approval of the IPM Coordinator.

When pesticide use is deemed necessary, the least hazardous material will be chosen. Only approved school personnel will apply pesticides (or contracted pest management professionals) and shall follow the Utah Dept. of Agriculture pesticide regulation R68-7. The applicator shall apply all products according to the pesticide label directions. At least one individual from YOUR School District will obtain and maintain a pesticide applicator license from the Utah Department of Agriculture and Food. **Ideally, anyone in the district applying pesticides in the school district should be licensed.**

###### General Pesticide Application Rules

* No routinely-scheduled (e.g., seasonal, monthly or weekly, etc.) pesticide applications will be made indoors or outdoors in ornamental plantings or to building foundations/exteriors.
* In turf, scheduled applications of herbicides should be avoided or reduced by using non-chemical turf management approaches to minimize their need. Turf areas should be rated based on level of use and managed appropriately.
* No pesticide fogging or space spraying will be conducted inside or outside.
* Pesticides will be used only when appropriate, along with other IPM-based management practices or when other pest prevention and non-chemical control measures have failed to reduce pests below tolerance thresholds. When a pesticide is used, the smallest amount of the least toxic product that meets pest management goals will be used (i.e., spot treatments, not broadcast applications).
* All pesticides will be stored in a lockable storage closet/room where children do not have access. Pesticide warning signs will be posted on the door of the storage device in English and Spanish. Poison stickers and Mr. Yuck stickers should be used to deter children.
* The district will maintain up-to-date pesticide Safety Data Sheets (SDS), pesticide product labels and available manufacturer information about inert ingredients and procedures for pesticide use.
* Indoors, pesticides will be used only in containerized bait formulation, or for spot treatments targeted to insect infestations or problem areas where a minimal amount of material is used. Only non-toxic rodent baits in block formulation will be applied in a Tier I, tamper-resistant bait box indoors for monitoring. Bait boxes shall be inaccessible to children and tethered/anchored when appropriate. Rodenticides will not be used indoors.

To ensure the safety of students and staff, the District will use the following criteria to ensure that the least hazardous pesticide and/or the least hazardous method of control be utilized:

* No use of any pesticide classified as acutely toxic by the U.S. EPA.
* No use any pesticide unless all ingredients in the product have been evaluated by the U.S. EPA and found to include no possible, probable, known, or likely human carcinogens; no reproductive toxicants; no known, probable or suspected endocrine disruptors; and no nervous system toxicants (either cholinesterase inhibitors or listed as neurotoxins by the Toxics Release Inventory). A pesticide will not be used if the facility does not have information on its ingredients, including inert ingredients.
* All ingredients in pesticides used by the facility shall have a soil half-life of 30 days or less.
* Properly applied gel bait or tamper-resistant containerized bait can be exempted applications if it represents the least hazardous treatment option.

Specific Pesticide Use Guidelines
The following guidelines will be followed each time a pesticide is used. A checklist will be used each time an application is made. The following items will be included on the checklist:

* Pesticide has undergone IPM Coordinator approval.
* Product is on the approved pesticides list.
* Restrictions and directions for use, labeling, and storage will be followed.
* SDS Sheets are available.
* Utah poison control center phone number is easily and quickly accessible.
* The person doing the application is certified and/or qualified to handle the equipment and material chosen and has been adequately trained.
* Commercial operators must have a license to apply pesticides on school grounds and be able to handle all equipment needed for the application.
* Make sure application equipment is appropriate for the job and properly calibrated.
* Make sure that all safety equipment (personal protection equipment: PPE), such as gloves, goggles, respirator, hat, etc. are available and worn when the pesticide is used. Make sure that the product is registered for use in Utah and know the laws regarding its use.
* Follow the product label directions for use, registrations, storage, and disposal to the letter. Understand the new Globally Harmonized System of pesticide labeling all persons applying pesticides in the school or district should receive training on how to read and interpret these new labels and safety data sheets. [A training video developed by OSHA can ensure a base knowledge of GHS](https://www.youtube.com/watch?v=RvQNf1Y7E84).
* Confine use of the material to the area requiring treatment (**spot-treat**).
* Treatments should be timed to coincide with a susceptible stage of the pest. Sometimes the social system (i.e., the people involved or affected) will impinge on the timing of treatments. Monitoring will provide the critical information needed for timing treatments.
* Treatments, whether pesticides or non-toxic materials, will only be applied when and where needed, as indicated by pest monitors or pest sightings/reports.
* Keep records of all applications and copies of SDS sheets for all pesticides used. What pesticide was used and for what? How much was used? All pertinent information about the treatment will be recorded for future reference about what was done. Records should be kept of ALL pesticide applications and should be available for local health officials upon request. This is true if pest control is handled in-house or contracted.
* Monitor the pest population after the application to see if the treatment was effective and record results.
* Be prepared for all emergencies and compile a list of whom to call for help and the kinds of first aid to be administered before help arrives. Place the list in an accessible area near a phone and with the crew applying the pesticide.
* Dispose of pesticides properly. Do not pour pesticides down the drain, into the toilet, into the gutter, or into storm drains! If you are unsure about how to dispose of the pesticide, call the manufacturer or your local utility company that handles sewage and storm drains.

###### Pesticide Handling & Storage Guidelines

* Transportation of pesticide containers to and from school property will be conducted with caution. An emergency spill kit (with chemical resistant gloves, cat litter or other absorbent material, goggles, and coveralls) will be carried when transporting pesticides in a vehicle as well as at the storage site.
* Pesticides will be transported in the beds of pick-up trucks and never in the cab of the truck.
* Inspect containers very carefully when loading and unloading.
* Pesticides will be stored in dry, well-ventilated locked rooms or closets and be accessible only to people authorized to use them.
* Pesticides will not be stored with food, pet food, plants, or fertilizer.
* Pesticide storage areas will be away from food areas, classrooms, and other sensitive environments.
* Pesticides will be kept in original containers with their labels.
* Expired products and products with faulty pesticide storage containers will be disposed of properly, according to the directions on the label.
* All pesticides and pesticide storage areas should be appropriately labeled in both English and Spanish and with universal symbols (skull and crossbones).

### RECORD KEEPING & PUBLIC ACCESS to INFORMATION

YOUR School District will maintain records of all Service Provider visits and pest control treatments for at least three (3) years. Information regarding pest management activities will be made available to the public at the YOUR School District administrative office. Requests to be notified of pesticide applications may also be made to this office. All parents / guardians will be informed of the district’s IPM program and their option to receive notification of all pesticide applications at enrollment and once annually.

Other records that will be kept, include:

* Pest sighting/report forms.
* Pest monitoring forms.
* Records on building inspections that include an IPM component.
* Pesticide use forms, regardless of whom applies the chemical, even is that chemical has exempt status.

### POSTING & NOTIFICATION: PESTICIDE APPLICATIONS

The IPM Coordinator shall be responsible to annually inform parents/guardians and students of the procedures for requesting notification of planned and emergency applications of pesticides in facilities and on facility grounds.

When pesticide applications are scheduled in facilities or on grounds, YOUR School District Service Providers and staff shall provide notification in accordance with law. Use of exempt pesticides will not require prior notification (see Pesticide Use Procedures above).

###### Posting

* Signs will be posted on facility doors and near the site of planned applications at least three business days in advance of pesticide use, and at the time of application. These signs will include:
* Date, time, location product name and active ingredient of application.
* Contact phone number for those seeking additional information.
* Warning or cautionary statements from product label (including restrictions on entering the treated areas or special cautions for certain individuals).
* Information about availability of product labels, MSDS and inert ingredients lists at the facility office.
* This information will be provided to all individuals working in the building.
* This information will be provided to all parents/guardians and staff who have requested notification of individual applications of pesticides.
* All parents who request such notifications and all faculty and staff will be notified of a pesticide application at least two school days prior to any pesticide applications in buildings or on grounds, with the exception of exempt and emergency applications.
* Applications exempt from prior notification are: antimicrobial agents, insecticide and rodenticide baits; container-delivery systems (e.g. targeted aerosol spraying of a wasp nest, ant/roach bait stations, ant/roach bait gels); emergency situations.
* In situations where pesticides must be applied on an emergency basis and are not an antimicrobial agent, insecticide or rodenticide bait, or a container-delivery system, notification to parents on the notification list and school faculty and staff will occur within two school days following the application and immediately by telephone for any parent/guardian who has requested such notification.
* Outdoor applications will be corded-off and flagged. Signs shall remain in place for one week after pesticide application, or a longer period of time if specified by the pesticide label.