

Elementary School

Model IPM Plan

Reducing Pesticides in Minnesota Schools Pilot Project

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Part A: IPM Policy for Sibley Elementary School

1. *What is IPM?*

Integrated pest management (IPM) is a decision-making process following a set of detailed procedures describing how particular pest problems will be avoided or managed. Such pest management tactics may involve the activities of all users of a school facility- teachers, students, administration, and parents- not just staff responsible for pest management. How a school is used has great bearing on the types of pest problems which may occur.

Integrated Pest Management (IPM) maintains a high standard of pest control while reducing reliance on pesticides. IPM is:

1. monitoring pests to detect problems early;
2. acting against pests only when necessary;
3. choosing the most effective control option with the least risk to people and the environment; and
4. applying our growing knowledge about pests to create long-term, low-risk solutions.

Routine pesticide applications, made on a regular calendar-based schedule, are not part of IPM. Allowing pests to flourish, increasing health risks to building occupants and others, is also not part of IPM.

2. *Why IPM in schools?*

IPM has potential to save time and money. By taking actions to avoid pest problems and applying pesticides only when necessary, many schools will reduce costs over the long term, while achieving excellent pest control results.

By improving pest control, reducing reliance on pesticides and incorporating least-risk control options, IPM reduces both pest and pesticide risks. Using IPM in the school environment is especially important. Children spend a great deal of time in schools and face greater potential for health effects resulting from pest and pesticide exposure. By reducing risks, IPM can also reduce potential liability to school systems from accidental poisoning, allergies or other harmful effects on children and adults.

Finally, IPM has an important role to play in agriculture, our homes and throughout our communities. Schools adopting IPM set an important example and can be instrumental in teaching staff, students and parents about the practice and benefits of IPM.

3. IPM Policy

Pest management practices will be based on the following principles:

- Whenever possible, prevention of pests will be the primary strategy to hinder their establishment and reduce the need for pesticide use.
- Knowledge of the pest's identity, biology and life cycle will establish the basis for selection of appropriate management strategies.
- Monitoring of pest numbers and record-keeping will be used to identify pests and sites requiring management action.
- Management strategies will be selected after consideration of the full variety of available options. Strategies will include all practical structural, non-chemical and biological management measures. Chemical measures will be utilized only as a last resort, when other methods fail.
- When necessary, monitoring results will be used objectively to determine action thresholds (the defined level of unacceptable numbers of a particular pest) at which least toxic controls will be employed.
- Educational activities will be conducted to enhance the cooperation and understanding among staff, students and the public.

About KEY PESTS

A key pest is one that is usually encountered at unacceptable levels at least once each school year. Geographic region and climate; surrounding landscape features; and type of construction, age and condition of school buildings influence which pests become key pests for your school.

Typical key pests in and around school buildings include ants, birds, cockroaches, head lice, yellowjackets and rodents. Typical pests on grounds are weeds and crabgrass.

Routine or regularly scheduled pesticide applications can mask key pests, which may not become apparent for some time after routine pesticide applications have been stopped.

For key pests, it makes sense to plan ahead and determine which inspection and monitoring procedures will be used to detect problems early, and how many pests or how much pest damage can be tolerated before action must be taken. Levels of weed tolerance and standards for turf maintenance are included in the IPM plan.

Key pests for this school include:

- **Ants**
- **Flies**
- **Mice**
- **Bees, wasps and yellow jackets**
- **Cockroaches (prevention only)**
- **Head lice**
- **Weeds, crabgrass**

Part B: IPM Planning & Communication

1. **Compliance with regulations:** The District Building Maintenance Manager and the Principal understand and ensure that school meets all Federal, State and local legal requirements related to pest management in schools (e.g., posting, notification, pesticide management, etc.)
2. **IPM Plan:** A written IPM policy is adopted stating a commitment to IPM implementation and identifying overall objectives relating to pest and pesticide risk management. The policy is used to guide decision-making, and is reviewed at least once every three years and revised as needed.
3. **IPM Committee:** An IPM Committee is formed to maintain the IPM policy, provide guidance in interpreting the policy, and provide oversight of the IPM program. The IPM Committee shall meet at least 3 times a year.
4. **IPM Coordinator:** The District Building and Grounds Director will have primary responsibility for coordination of IPM. The Head Custodian will be the IPM Coordinator for the school and is designated to provide day-to-day oversight of IPM implementation. IPM coordinators are aware of and understand Federal, State and Local laws and regulations pertaining to pest management in school buildings.
5. **Pest management roles** are developed for and communicated to administrators, teachers, custodians, food handlers, students, parents and outside contractors (e.g., pest control operators, food suppliers).
6. **Schedule of inspection and monitoring:** The written IPM Plan includes a schedule for comprehensive inspection and monitoring of buildings and adjacent grounds; schedule for areas requiring more frequent inspection/monitoring (e.g., food storage, preparation and serving areas); and a list of key pests and action thresholds for each key pest.
7. **Posting:** At least 24 hours prior to pesticide application, postings are placed in the main office detailing locations to be treated and contact information for further information. Copies of the pesticide label and MSDS sheet for the material(s) to be used are included in the posting and maintained on file. This notice remains posted for at least 48 hours after the application.
8. **Record-keeping:** Complete records of each pesticide application, including product name, quantity used, date and time of application, location, application method and target pest are maintained by the district and the PCO for at least three years.
9. **Public access** is provided to all information about the IPM policy, IPM plan and implementation. The IPM plan and MSDS are available in the main office for review by interested persons.

10. PCO Contracts: If outside contractors are used to provide pest control services,

- a written contract is signed identifying specific IPM practices to be used, including regular inspections, monitoring where appropriate, record-keeping and agreement to abide by the IPM Policy and IPM Plan, including use of only Reduced-Risk or Least-Risk Options.
- contract proposals are not evaluated on the basis of low bid only, but are also evaluated on the basis of the contractor's experience and performance history with an IPM approach, ability to conduct preventative inspections and demonstrated practice of using chemical controls as a last resort.

11. A Pest Sightings Report Log Book is maintained in the kitchen. Staff and students are instructed to report all pest-related incidents to the custodian including date, time and exact location of the sighting, a description of the pest or pest damage, and the name of the person reporting the incident. Staff and students are encouraged to use zip lock bags to collect and identify specimens. The log is used to direct pest management activities, and the custodian or PCO service representative record responses taken to each report. Pest management roles communicated at least annually to all turf and landscape maintenance personnel include prompt reporting of pest sightings, pest damage or conditions favoring pests to the pest manager.

12. Inspection records: Records are maintained of inspection results, pest management actions and evaluations of results.

13. Notification

- If anyone requests, the school maintains a registry of chemically sensitive students, staff and others requesting special consideration in the event of a pesticide application. School provides direct notification to those individuals at least 24 hours in advance of any pesticide application.
- **Registry:** School maintains a registry of individuals who have requested notification of pesticide use in accordance with Minnesota Statutes 123B.575, *Janet B. Johnson Parent's Right to Know Act of 2000*. School provides direct notification to those individuals at least 24 hours in advance of the application of any pesticide not on the Reduced-Risk or Least-Risk Pest Control Option List (toxicity level IV or higher).

14. Training: Key staff, including new staff, are provided with initial training IPM and with informational updates as needed.

15. Prevention strategies- building:

- The IPM Plan includes a list of actions to prevent and avoid key pest problems (e.g., building repair, waste handling equipment upgrades) and a timeline for implementation.
- The IPM plan specifies policies for building maintenance, new or renovated building design that build in preventative and avoidance strategies for pests.

16. A complete **inventory of all existing lawn maintenance equipment** is maintained, as well as a list of desired equipment for reduced risk pest control options (e.g., aerator, de-thatcher, spring-tooth harrow, flotation tires, etc.). Desired equipment is worked into the budget.
17. **Prevention strategies- grounds:**
- The IPM Plan includes a list of actions to prevent and avoid key pest problems (e.g., replacement of problem plants, moving problem plants to more favorable locations, slope modification, pavement replacement and repair) and a timeline for implementation.
 - The IPM plan specifies policies for grounds maintenance, new or renovated landscape design that build in preventative and avoidance strategies for pests such as avoiding pest-prone plants, proper placement, etc.
18. **Newsletter:** An informational bulletin or newsletter will be distributed at least two times per year to inform staff, students, parents and others as appropriate about key IPM issues such as pest management roles, reporting, sanitation, etc.
19. **Inclusion/ education of students:** Teachers incorporate school building IPM into curricula and/or class projects. Teacher, Terry Heil will do a 3rd & 5th grade project, including student interviews and presentations. We will also explore doing an enrichment program on IPM and environmental issues to be showcased in an April environmental health fair or similar event.

Part C: IPM Administration Building: Inspection, Sanitation & Exclusion

1. **Inspection:** A comprehensive inspection of all buildings is conducted by Head Custodian and District Building and Grounds Director at least annually for defects including cracks, crevices and other pest entryways; food, moisture and shelter resources available to pests; moisture, pest or other damage to structural elements; termite earthen tunnels, pest fecal matter or other signs of pest activity; etc. A report of all defects is prepared, corrective actions are identified and a timeline is established for completion.

Inspection September 21, 2000.

- **Live traps in kitchen and storage areas installed the day before had no pests.**
 - **Glueboards are installed under the sink in kitchen to monitor for cockroaches- none were seen.**
 - **Traps behind pop machine and in cupboard in teacher's lounge.**
 - **Check all door sweeps.**
 - **Check screens for tight fit.**
 - **Monitor lights at entrances for pest entry.**
 - **Student coat hooks are close enough for head lice transfer.**
2. **IPM inspection checklist** is used for periodic inspections, listing each building feature (e.g., foundation, eaves, etc.) and room to be inspected, including specific locations within features or rooms (e.g., vents, storage closets) to be included in the inspection, and specific conditions to be noted (e.g., repair, cleaning needs). Attached checklist developed by MN Dept. of Agriculture will be utilized.
 3. **Food policies for areas other than kitchen and cafeteria:** Food and beverages are allowed only in designated areas.
 - **Snacks/food items in all classrooms kept in sealed plastic containers.**
 - **Food in teacher's lounge kept in refrigerator or sealed containers.**
 - **Students instructed not to leave food in lockers or desks overnight.**
 - Pest management roles communicated to staff and students include removing food or food wrappers from lockers and desks on a daily basis.
 - Lockers and desks are emptied and thoroughly cleaned at least once a year.
 - **Posters of food policies will be displayed throughout the school.**
 4. **Cleaning of floors and carpets:**
 - Floors are cleaned and carpets vacuumed daily in areas where food is served, and at least weekly in other areas.
 - Furniture in classrooms and offices that are rarely moved (e.g., staff desks, bookcases, filing cabinets) receive a thorough cleaning around and under to remove accumulated lint, etc., at least annually.

5. **Food storage:** Inspection aisles are maintained around stored products. Stored products are not permitted direct contact with walls or floors, allowing access for inspection and reducing pest harborages. Metal mesh shelving in food storage areas is sufficient.
6. **Food rotation:** Stored products are rotated on a “first in, first out” basis to reduce potential for pest harborage and reproduction.
7. **Storage of food products in non-food areas:** Food products and other potential pest food items (e.g., plant seeds, pet food and bedding, decorative corn, gourds) are refrigerated or stored in glass, metal or plastic containers with pest-proof lids. Food items used as crafts materials (e.g. seeds) are stored in pest-proof plastic containers.
8. **Recycling** is placed in plastic bags, sealed with twist ties and disposed of on a daily basis.
9. **Cleaning in food areas:**
 - Food-contaminated dishes, utensils and surfaces are cleaned by the end of each day; sponges, mops and mop buckets are properly dried and stored (e.g., mops are hung upside down, buckets are emptied).
 - Surfaces in food preparation and serving areas are regularly cleaned of any grease deposits. Appliances and furnishings in these areas that are rarely moved (e.g., refrigerators, freezers, shelf units) receive a thorough cleaning around and under to remove accumulated grease, dust, etc., at least monthly.
 - Food waste from preparation and serving areas, and waste with food residues (e.g., milk cartons, juice boxes) is drained of excess moisture before discarding and stored in sealed plastic bags before removal from school grounds.
10. **Trash/recycling rooms and dumpsters:**
 - are regularly inspected and spills cleaned up promptly; indoor garbage is kept in lined, covered containers and emptied daily. All garbage cans and dumpsters are cleaned regularly.
 - Trash cans are double bagged or single bagged and cleaned on a regular basis.
 - Outdoor garbage containers and storage are placed away from building entrances. Stored waste is collected and moved off site at least weekly.
11. **Food delivery:** To the extent possible, food products not delivered in pest-proof containers (e.g., paper, cardboard boxes) are stored refrigerated or transferred to pest-proof containers upon delivery.

12. **Quarantine:** Incoming shipments of food products, paper supplies, etc. are inspected for pests and rejected if infested. Staff who handle incoming food boxes are instructed to put an infested box in a sealed plastic bag, so pests do not escape, and to place it in the dumpster immediately.
13. **Cardboard reduction:** Storage of food, paper products and other kitchen items in cardboard boxes is reduced.
14. **Vending machines** are cleaned regularly.
15. **Waste materials in all rooms** within the school building are collected and removed to a dumpster or compactor daily.
16. **Packing/shipping trash** (bags, boxes, pallets) is promptly and properly disposed of or recycled.
17. **Exterior doors** throughout the building are kept shut when not in use.
18. **Head lice:** Students are advised not to exchange hats, combs or hairbrushes. If head lice are reported, the School Nurse distributes educational materials which describe cleaning methods, how to prevent spread and non-toxic treatment with *Dippity-do* or mayonnaise and combing. School will also try the “zapper” comb and the new enzyme products (*Lice Be Gone*, *Nature’s Best*) to see how effective they are. If nurse identifies resource issues with families of students with chronic head lice problems, we will establish a small emergency fund to help these families afford the laundromat and the treatment products.
19. **Animal wastes from classroom pets or laboratory animals** are flushed or placed in sealed containers before disposal.
20. **Floor and sink drain traps** are kept full of water. In food service areas, drain covers are removed and drains are cleaned weekly with a long-handled brush and cleaning solution. In other areas, such as drains under refrigeration units, drains are cleaned monthly.
21. **Window screens:** Windows and vents are screened or filtered. School policy requires use of screens, when windows are opened.
22. **Vent and duct cleaning:** The inside of vents and ducts are cleaned annually. Vent or heater filters are cleaned or replaced at least annually.
23. **Vegetation near structure:**
 - vegetation, shrubs and wood mulch are kept at least one foot away from structures.

- Tree or shrub limbs and branches are maintained at least 6' away from structures.
24. **Building eaves, walls and roofs are inspected** frequently during nesting season for bird and other nests, and these are removed.
 25. **Weather stripping and door sweeps** are placed on all doors to exclude pest entry.
 26. **Moisture sources** are corrected (e.g., areas where condensation forms frequently are ventilated, plumbing and roof leaks fixed, dripping air conditioners repaired). Floor drains are screened and sewer lines are in good repair.
 27. **Cracks and crevices** in walls, floors and pavement are corrected.
 28. **Openings around potential insect and rodent runways** (electrical conduits, heating ducts, plumbing pipes) are sealed.
 29. **New purchases:**
 - Purchases of new kitchen appliances and fixtures are of pest-resistant design (i.e., open design, few or no hiding places for roaches, freestanding and on casters to ease thorough cleaning).
 - Purchases of new office and classroom furniture that is rarely moved (e.g., staff desks, bookcases, filing cabinets) are of a design that permits complete cleaning under and around the furniture, or ready movement for cleaning purposes.

Part D: Building Pest & Pesticide Risk Management

1. **Pesticide applicators:** All pesticide applications are made by a person licensed and/or certified by the state to apply pesticides in commercial facilities, except that an unlicensed custodian is authorized to apply wasp and hornet and ant treatments in emergency situations. Licensed persons include district and PCO staff.
2. **Pesticide applications** are made only after detection of a verifiable pest problem and accurate identification of the pest. Applications are not made on a routine or regularly scheduled basis (e.g., weekly, monthly applications are not made).
3. **Pest contamination:** Food that has come in direct contact with pests (e.g., ants, cockroaches, mice) is considered contaminated and is disposed of.
4. **Baits:** Chemical baits, if used (e.g., for ants, cockroaches, rodents), are placed in a locked, distinctively marked, tamper-resistant container designed specifically for holding baits and constructed of metal, plastic or wood. Bait containers are securely attached to floors, walls, etc. such that the container cannot be picked up and moved. Baits must always be placed in the baffle-protected feeding chamber of the container and not in the runway. Parafinized or weatherproof baits are used in wet areas. All bait use is in areas inaccessible or off-limits to children. Baits are not used outdoors unless bait containers are inaccessible to children (e.g., placed underground in pest nests or on building roofs).
5. **Mapping of baits and traps:** If baits or traps of any kind are used, a map or floor plan of each area where baits or traps are located is prepared, numbering each bait station or trap, and entering the location of each numbered bait station or trap on the map. Bait stations or traps are marked with appropriate warning language.
6. If **dust formulations** are used, these are applied only to areas that can be sealed (e.g., wall voids) to prevent exposure of students to airborne dust particles.
7. **Reduced-Risk or Least-Risk Options are the only pest controls used.** No pesticide applications are made for pests that cause aesthetic damage only.
8. **Storage of pesticides on school grounds:** No pesticides are stored on school grounds, except for wasp and hornet and ant treatments.

Part E: IPM for Grounds: Inspection & Pest & Pesticide Risk Management

1. **IPM Plan:** A written IPM Plan is prepared that includes a schedule for comprehensive inspection and monitoring of school grounds; schedule for areas requiring more frequent inspection/monitoring (e.g., athletic fields); and a list of key pests and action thresholds for each key pest.
2. **Turf and landscape maintenance:** The IPM plan divides turf and landscape areas by basic level of use (i.e., athletic fields vs. lawns, highly visible landscape areas vs. less visible areas). Monitoring schedules and action thresholds are appropriate to each level. Turf will be maintained at levels I (high maintenance) to IV (low maintenance), according to use patterns and visibility, as specified in the Turf Maintenance chart.
3. **Inspection:** A comprehensive inspection of all school grounds is conducted by the district ground supervisor and head custodian at least annually to monitor turf quality, health of landscape plants, and other potential problems.
September 21 Inspection:
 - **West side playground is in good shape.**
 - **Some compaction and weeds, but on the whole the grounds look good.**
 - **Roots are 6" and no thatch.**
 - **Aeration in Spring and Fall recommended. District has an aerator.**
 - **No spraying for 1 ½ years- but they have torched weeds in the sidewalk.**
 - **Bare spots in front of building could be corrected by adding topsoil and re-seeding. Can pre-germinate seeds.**
 - **General over seeding is not needed.**
4. **Pesticide applicators:** All pesticide applications are made by a person licensed and/or certified by the state to apply pesticides in commercial settings. This includes contracted PCO or district grounds staff. Unlicensed custodial staff may use wasp and hornet treatment in emergency situations only.
5. **Pesticide applications** are made only after detection of a verifiable pest problem and accurate identification of the pest. Applications are not made on a routine or regularly scheduled basis (e.g., weekly, monthly applications).
6. All **pesticide application equipment** is calibrated at the start of each growing season. Calibration records are dated and maintained with spray records. All pesticide application equipment is re-calibrated at mid-season.
7. **Pesticide and fertilizers are loaded** into application equipment over a hard surface where spills can be promptly and thoroughly cleaned up, without danger of spill runoff or leaching into soil.

8. **Baits:** Chemical baits, if used (e.g., for voles, moles, etc.), are placed in a locked, distinctively marked, tamper-resistant container designed specifically for holding baits and constructed of metal, plastic or wood. Bait containers are securely attached to immovable objects such that the container cannot be picked up and moved. Baits must always be placed in the baffle-protected feeding chamber of the container and not in the runway. Parafinized or weatherproof baits are used in wet areas. All bait use is in areas inaccessible or off-limits to children (e.g., placed underground in pest nests or on building roofs).
9. **Mapping of baits and traps:** If baits or traps of any kind are used, a map of each area where baits or traps are located is prepared, numbering each bait station or trap, and entering the location of each numbered station or trap on the map. Bait stations or traps are marked with appropriate warning language.
10. **Spot pesticide applications** limited to affected areas, plants or plant parts are made in place of an entire management unit, group of plants or entire plant, respectively (e.g., one corner of a lawn is treated for grubs instead of treating the entire lawn, or one shrub or portion of a shrub is treated instead of treating all like-shrubs or the entire shrub).
11. When **effective control can be achieved at reduced rates**, pesticide applications are made at less of the full-labeled rate.
12. **Use of colorant:** Where appropriate (e.g., herbicide applications), a colorant is used to mark the treated area. (Optional).
13. **Reduced-Risk or Least-Risk Options** are the only controls used.
14. **Landscape plants:**
 - Pest Manager can correctly identify the landscape plants present on school grounds.
 - Landscape plants are scouted at least monthly during the growing season for conditions requiring action, including damaged, diseased or dead limbs; soil erosion and compaction; and insect, disease and weed pests and damage. A regular pattern is used to ensure that all plantings are scouted. Scouting results are noted in writing and these records are maintained for at least three years.
15. **Soil testing:** Soil in landscape plantings is tested at least every five years for nitrogen, phosphorus, potassium and pH. Fertilizers and other soil amendments are applied according to soil and/or plant foliage test results, not on a routine or regularly scheduled basis.

16. **Soil compaction is monitored** regularly and problem areas corrected.
17. **Irrigation** of established plants is scheduled according to soil moisture and anticipated weather, and not on a routine or regularly scheduled basis.
18. **Renovation:**
- When renovating, adding new plants or establishing new landscape areas, plant species are selected to address site-specific growing conditions (e.g., tolerance to key pests, pH levels, soil type, light levels, hardiness zone, annual rainfall, etc.). Plant spacing is adequate to ensure adequate light, nutrients and water.
 - When renovating, changes in grade or drainage around established trees is avoided.
 - Key plants in the landscape are removed and replaced with plants less susceptible to pest problems.
 - Native species are used, when possible.
19. **Mulching:** Trees, shrubs and perennial beds are mulched to conserve soil moisture, improve organic matter, reduce compaction and moderate soil temperature.