

CHAPTER 9

HABITAT MODIFICATION, CHANGING THE CONDITIONS CONDUCTIVE & INCOMING GOODS INSPECTION



“An ounce of prevention...is worth a pound of cure.” – Desiderius Erasmus

HABITAT MODIFICATION

Habitat modification usually involves removing food, water, breeding sites, and shelter used by the pest. But it can be as simple as routine cleaning with Safe Solutions cleaners or **properly installing negative ion plates**; once installed the low level negative ion field creates an atmosphere pleasing to people and plants, but irritating to fleas, cockroaches, ants, scorpions, termites and several other pests - they simply will pick up and leave an area with negative ions, e.g., near the beach in nature or your building with negative ion plates. Dry copper and/or Teflon tapes and sprays create surfaces too slippery for snails, slugs and insects to climb. These products are from Sure-Fire products by ConSep, Inc. in Bend, Oregon. Screens, baking soda, borax, fans, dehumidifiers, Safe Solutions Enzyme Cleaner with Peppermint, food-grade DE and/or caulk are also excellent habitat modifiers.

Outdoors, you should routinely trim or remove dense vegetation near buildings, clean up all visible trash, keep garbage in closed containers, drain off all standing water, clean up animal wastes and spilled animal feed, and eliminate any other items that attract pests. **Inside**, you should begin by caulking all visible cracks and crevices, storing foods and food wastes in tightly closed containers, cleaning up spills and residues, removing trash and other materials that can be used for nests, properly installing and maintaining dehumidifiers, fans and/or proper ventilation, and thorough vacuuming and dusting on a regular basis. (There is a 20-minute training video put together by Dr. Al CoFrancesco of the U. S. Army Corps of Engineers Waterways Experiment Station, which illustrates how three principle types of sealant - acrylic latex caulk, the waterproof adhesive membrane Bituthene, and fast-setting cements - can be used to pest-proof dining facilities.)

To assist in good sanitation, make sure interior areas are well lighted to simplify cleaning and easy detection of pests and pest damage. Sweepings and other wastes should be daily taken to a closely watched and maintained disposal area outside of the building. One problem associated with trash is the recycling of cans, bottles and other materials. Many recycling containers are cardboard boxes with the words "Recycled Cans/Bottles/Plastic" written on them. Such boxes are an open invitation to pests to come in and feast upon the residues and to hide in, around and among the boxes. While recycling is a wonderful idea, it should be conducted with sanitation in mind. The recycling receptacles should be lined with a plastic trash can liner which is closed with a twist tie or other such device at the end of **every** day. Another idea is to use a plastic trash barrel with a plastic liner for a recycling container. The liner makes removal and transport of the materials easier and keeps the containers clean.

When you find an infestation of insect pests outside or inside whether box elder bugs, spiders, elm beetles, cockroaches flies, or whatever. Simply strap on or bring in a vacuum cleaner (with a tablespoon of baking soda) or rinse-and-vac (with diluted Safe Solution Enzyme Cleaners). We recommend you either use a rinse-and-vac or a backpack vacuum which weigh only about 10-14 pounds, are relatively comfortable to wear and maneuver and are quite powerful. Usually they have 900-1000 watt motors and 50' cords. Some models are equipped with a HEPA (high efficiency particulate air) filter - these filters stop the chance of your contaminating the ambient air with insect fragments and dusts. The vacuum not only sucks up the bugs but whatever they are feeding on. Then bait that area with over-the-counter boric acid and/or borate-type or aspartame baits and/or simply caulk all visible cracks, crevices, and other openings in the area and leave a sticky trap to monitor/evaluate your control of that area.



Remove all dirt mounds, wood pieces, and other cellulose debris from areas beneath buildings to remove the conditions that favor the growth of termite or rodent problems. To protect against subterranean termites, fungi and rot, never leave unprotected wood in direct contact with soil or other sources of moisture such as leaking pipes or faulty drains. Provide adequate ventilation to all areas beneath your building and install and properly maintain dehumidifiers and/or fans and/or visquine.

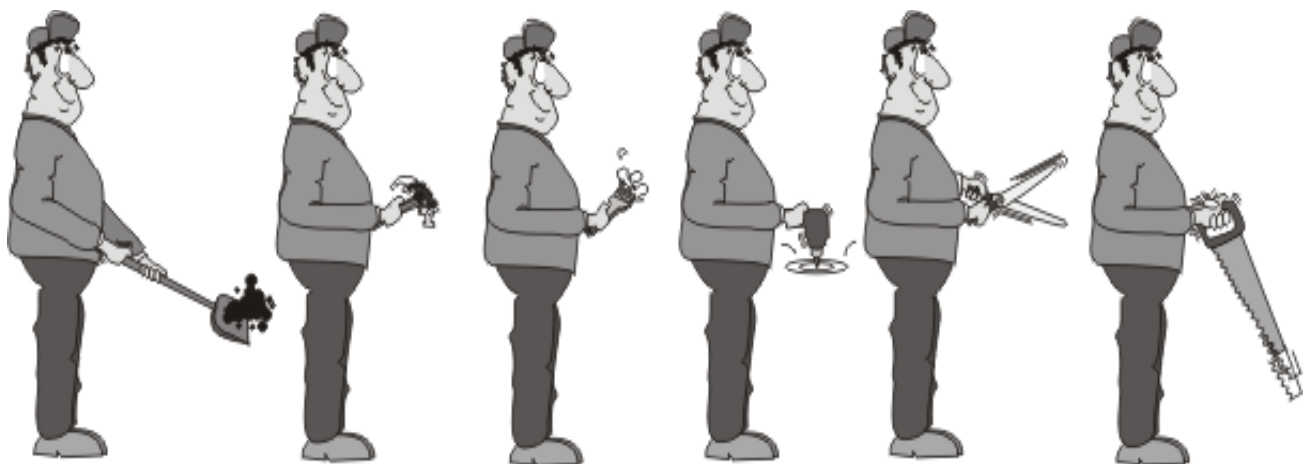
The flow of air inside your building can greatly assist or deter pest distribution. To determine air flow, ask the building maintenance supervisor regarding the air flow, air exchanges per hour, and type of air exchange and filtration system used. Facilities with an HVAC system will have less to worry about because the filters keep out most pests. All of the ducts, filters and the entire control system should be inspected to make sure there are no leaks that might allow pests to enter the system and spread throughout the building. All filters should be changed on a routine basis.

Outdoor lights placed near entrances to buildings act like an insect magnet - they attract many flying and crawling insects and their predators at night. If possible, locate light fixtures as far away as possible from entrances. Sodium vapor lights are better than mercury vapor lights or standard incandescent lights for outdoor use because they emit a spectrum of light that is less attractive to insects - yellow "bug" bulbs work on the same principle. Effective use of lights may include the placement of UV light traps at loading dock entry doors. This will stop the insects that are attracted to the light, such as flies and certain moths. The catch trays must be emptied weekly or more often if necessary.

Routinely flush the sewer system with massive volumes of water and Safe Solutions Enzyme Cleaner with Peppermint from fire hydrants and remove much of the substrate which supplies pest populations. Apply Safe Solutions Enzyme Cleaners monthly.

Install free-range Guinea fowl outside to protect your garden, shrubs, lawn and home from many different pests.

Birds can become pests when they use your building or statues for roosting or nesting. Birds generally prefer flat surfaces that offer protection from wind, rain, and extreme temperatures. Cliff and Barn swallows build their mud nests under overhanging ledges or roofs for the same reason. To prevent birds from roosting or nesting, use plastic or wire mesh screening, cloth netting, or metal flashing. The ultimate decision on how best to deal with pest birds usually depends on the species that are causing problems, their location on the building, and physical features of the building. Birds sprayed with water and a wetting agent at temperatures 40° F. or lower will quickly die. Birds, even sparrows, pigeons and starlings are usually protected by many state, federal and local laws so be sure you **contact your local conservation department before beginning any bird control.**



HOW TO BEGIN TO CHANGE THE CONDITIONS CONDUCTIVE TO INFESTATION AND TO LOWER THE CARRYING CAPACITY TO CREATE PERMANENT PEST REDUCTION

MODIFICATION

EFFECT ON PESTS

1. Install negative ion plates and/or ultra sound machines. Changes the habitat so natural energy repels insects, e.g., ants, roaches, fleas, termites and scorpions.
 2. Thoroughly clean food preparation and eating areas at least daily and clean up food or liquid spills quickly. Clean up food or liquid spills quickly. Clean sewers at least bi-weekly or monthly use preformed or Safe Solutions enzyme cleaners. Eliminates food sources and many pests, e.g., moths, ants, flies, cockroaches, etc. and helps prevent rodents and other pests.
 3. Increase light and ventilation. Install dehumidifiers and/or fans. Force hot air from a hair dryer or tile softener into all cracks, crevices and/or voids. Clean with borax. Makes areas unsuitable for fungi and molds, subterranean termites, flea larvae and other insects such as cockroaches and silverfish by reducing moisture. Reduces condensation. Most insects live and thrive best in dark, moist areas.
 4. Caulk all visible cracks and crevices in walls, ceilings, cabinets, moldings and other uses. Install copper, Teflon tapes or Teflon sprays. Note: Most caulking compounds contain volatile toxic solvents, which are not good to breathe and can be very dangerous, especially to people who have become chemically sensitized. Removes and/or prevents the entrance and/or reduces the amount of hiding and nesting places available for cockroaches and fabric pests, ants, rodents, spiders and other crawling insects.
- Note: Where chemical odor is a problem use Phenoseal vinyl adhesive caulk which is a water-based product. (Vinyl is synthesized from petroleum.) It is non-flammable, non-toxic and mildew and water resistant, cleans up quickly with just a wet cloth and water, and comes in many colors. It sets to a tough, flexible plastic seal.
5. Carefully inject foam insulation, talcum powder, boric acid, food-grade DE into wall voids, beneath cabinets, and in other inaccessible areas. Kills or repels cockroaches, ants and many other insects.
 6. Launder or dry clean clothing and linens before storage; seal in heavy plastic. Reduces problems with fabric pests.
 7. Seal all food in pest-proof containers or place in refrigerator or freezer. Eliminates food sources for cockroaches, rats, mice, ants and stored product pests.
 8. Insulate water pipes (seal them well to prevent insulation from being a habitat for cockroaches). Prevents condensation, which provides water for pests, rots and molds.
 9. Store all food wastes in tightly closed containers; daily remove from your building and clean the containers. Eliminates food sources for fruit flies, cockroaches, flies, mice and rats.
 10. Reglue loose wallpaper, patch peeling plaster or paint, remodel to remove or fill in all inaccessible areas. Reduces/eliminates hiding and nesting sites for cockroaches and silverfish, rats, mice, spiders, firebrats and other pests.
 11. Vacuum daily or at least biweekly (see vacuuming notes that follow). Correcting the following problems prevents many pests including wood destroying organisms. Eliminates insects, eggs, nests and the foods the pests need to survive.

Correcting the following problems - prevents pest problems

12. Periodically monitor the moisture content of the plaster or paneling of inside walls. An elevated moisture content on the outer wall would indicate trouble. There could be a leak in the roof or retrofitted insulation with the vapor barrier on the cold side. Such a condition will likely result in rot and insects such as carpenter ants and others.
13. Wood joists can be checked with a moisture meter for possible elevation of moisture content. The moisture meter needle may jump at the spot where a hidden termite colony lurks.
14. In the basement, walls should be checked with a moisture meter to determine possible leaks in roof drainage pipes below grade or drainage in the grade outside.
15. A moisture meter can also alert to leaks around bathtub, shower and sinks which lead to insects and rot.
16. Wooden stakes or tongue depressors can monitor the presence of termites.
17. Trash piles, new construction, changes in grade, bad sanitation practices all can be checked and monitored each time an inspection is made.
18. Screens over the chimneys and gutters also should be checked; plugged soffit vents and leaks around chimney and vents also should be noted.
19. Properly installed door and window sweeps, screens, weather stripping seals and blocked dryer vents reduce the chances of pest invasion.
20. Move foundation plants further away from the foundation to allow a strip of soil to be barren or if you must cover the soil use ground up tires or stones over a weed free fabric that allows moisture and air to pass through it.
21. Check gutters for leaks, slope problems, debris and moisture problems to help prevent carpenter ant damage; damage by squirrels and birds can also be noted at this time.
22. Routinely monitor/inspect for cracks crevices and other openings, then caulk, cement patch, seal, mortar, plaster or fill them all in.
23. When the pipe chases are larger than the pipes that go through them, the gaps should be sealed with clear, weather-proof latex acrylic CAULKING OR FINE COPPER Wool (SIMILAR TO STEEL WOOL). Copper is best because it does not rust.
24. Vents on the roof and other openings that may allow pests to enter the facility should also be sealed. For vents, the easiest method is to install screening over the openings to prevent birds, roaches and rodents from entering.
25. Sinks and other pipes typically have a much larger hole in the wall than the pipe, which leaves a ready-made highway for pests to enter the area. These gaps around the pipes should be filled with copper wool and then caulked. All plumbing should be inspected and repairs made as needed. Any other openings should be sealed using fine copper wool and/or caulked.
26. All windows should seal completely when closed. Screens should be properly installed on all windows that are opened. If an air conditioner is placed in the window, weather-stripping should be securely installed around the unit to seal all gaps.
27. Sometimes windows will have a thin line of rubber weather-stripping already in place between the glass and the frame. Visually inspect this strip on each window to check for small gaps. If gaps are found, they should be sealed with clear weatherproof latex acrylic caulking.
28. Doors present special problems in excluding pests. Gaps occur around most doors once closed. This ineffective seal not only allows pests to enter the facility, but also allows heat or air conditioning to escape. All doors should close tightly with no openings around the edges and/or bottoms.
29. To check if a door is sealed, close the door at night and look for light coming in from the outside around the edges. If the seal is good, you should not see any light. To correct a poor seal, install door seals and/or sweeps (rubber or brush) and weather-stripping.
30. Emergency doors present special problems. They must be sealed properly to prevent pest entrance but also adhere to the fire codes. Three-inch wide masking tape may be placed at the juncture of the door and the door jamb when the door is shut. This will not impede the egress of personnel in the event of a fire or an emergency or remove paint (if not left on the door for extended periods of time), but will provide a most effective and inexpensive seal.
31. Roll-up doors are the most difficult of all types to seal. Rubber flaps may be installed over the top of the roll from the outside to prevent entry. Weather-stripping may be installed in the door tracks and on the bottom of the door. **Do not use roll-up doors.**

TRUE IPM WEED CONTROL

32. Native Americans used fire to keep brush out of grasslands for centuries, and farmers in the southern U. S. have flamed fields of cotton, sugar cane and corn since 1852, when the first flaming equipment was patented. Use of flammers in agriculture declined in the 1950's when the romance with herbicides was going strong. Today flaming is used to control weeds along school fences, in row crops, orchards, railroad tracks, waterways, ditch banks, and other locations where herbicides may cause damage. It is ironic that removing weeds by flaming has never caught on with American gardeners and schools, while in Europe it is a common weed control technique for residential gardens and urban parks. Flaming utilizes a propane- or kerosene-fired torch, mounted on a long wand, to sear, not burn, the tops of young weeds. The flame produces temperatures of 2,000° F. This heating or scorching causes the cell walls to burst. The plant or weed then dries out and dies. Then, after 2 - 3 days, sweep or rake up the wilted leaves. Essential oils, vinegar, steam and salt all are "natural" herbicides; there are many other ways to over-fertilize plants, to flame them or boil them or use some commercial steam generating equipment to control all plants.

Obviously such an ongoing program or changing the conditions conducive to infestation, sanitation and habitat modification requires a lot of cooperation.

All staff and occupants should be trained about what pest damage looks like, how to identify pests and what to do in case of an infestation. Once a pest or an object is found to be infested, it should be immediately collected for identification. Then the pest and/or the infested object should then be evaluated and a treatment method selected to safely remove the problem. Everyone should be informed that they must become the eyes and ears of the building and work with each other to maintain proper sanitation levels, identify pest problems and monitor problem areas. It is necessary that everyone in your building and/or home understand how these practices influence pest problems. People living or working in a building must

keep food, food waste, and trash in pest-proof containers, and store other items in designated, secured places where they cannot attract pests. Everyone should promptly report pest sightings.



Housekeeping and landscape maintenance workers can help by keeping interior and exterior areas free of trash, nesting sites, and other items that might be attractive to pests; they should provide containers for wastes and specify locations for storage of other materials. Buildings must be inspected and monitored on a regular basis to ensure that habitat reduction and sanitation conditions are maintained and to spot new access points and problem areas as they occur. People responsible for housekeeping and landscape maintenance must be notified quickly of any conditions that promote possible pest entrance and/or buildup so they can take corrective action.

VACUUMING NOTES: The best way to remove insects, debris and food is to vacuum (then caulk) all cracks and crevices and floors at least bi-weekly and/or whenever you see the pests, debris, spider webs, droppings etc. Poisons not only are toxic to people and pets, they leave the dead insects. As these dead insects decompose they contaminate the ambient air (the air we breathe) and cause all kinds of breathing problems. In addition dead insects can be a source of food to other insects - creating an ongoing infestation problem. You can use a rinse-and-vac, steam cleaner, regular vacuum (canister or upright with a disposable bag) a Dust Buster®, or an especially designed back pack such as the ProTeam Sierra to vacuum with. The greatest increase in roach allergen in the air takes place 2 months after the greatest buildup of roach population. Clean and spray with diluted Safe



Solutions Enzyme Cleaner with Peppermint. Vacuum them up next time!

Water vacuums are also superior pest control tools because they trap dirt, dust, and drown insects in a swirling water and soap or enzyme bath. Because they have no bag to hinder air flow, they are more powerful than ordinary vacuums and can suck up greater numbers of pests and debris and the various foods pests eat. Usually dry vacuums have enough dust to smother the insects pests you vacuum up - but if your disposable bag is "clean" and you are facing wasps (or similar stinging or biting insects) you can initially add 2-3 tablespoons of talcum powder or corn starch to help destroy/smother the pests inside the bag as you vacuum.

EXCLUSION. Exclusion is a type of habitat modification useful for keeping fleas, ants, cockroaches, stored-product pests, termites, rodents, and other pests from entering buildings. The design, construction and maintenance of a building will either promote pests or exclude them. Use screens, door sweeps and caulk.



Constantly check building exteriors for openings through which insects, rodents or other pests can enter, e.g., doorways and windows must be fitted with tight-fitting screens and/or doors should be properly weather-sealed. Inspect attic and foundation vents to ensure that they are tight and screened to exclude squirrels, bats, rodents and insects. Carefully inspect for foundation or wall cracks, gaps in siding or joints, and areas where pipes, wires or other objects pass through walls. Fill all cracks and crevices and other openings with silicone caulk, hydraulic cement, mortar or other suitable patching material, and/or cover with metal flashing. Inspect chimneys and roof vent pipes for adequate screening and/or properly fitting caps. Remove all organic mulches, e.g., bark or chipped wood and replace them with ground up tires or stones.

Select PEST EXCLUSION MATERIALS to repel or exclude the type of pests you found. Insects can gain entry through extremely small openings. Mice are able to squeeze through cracks as small as 1/4", and many rats manage to get through 1/2" openings. Rodents can chew through lead, wood, thin metal, caulking, soft patching compounds, and even some concrete mixtures. Bats, on the other hand, do not chew through walls, roofs or other surfaces, but enter structures through existing openings 3/8" or larger. Exclude bats by using nets, thin wire mesh, sturdy cloth mesh, or any well-secured patching material.

| MATERIAL | BEST TYPE | USES | PESTS EXCLUDED |
|---------------------------------|---|---|---|
| Baking soda | Arm & Hammer® | Anywhere you see nests. | roaches, ants, etc. |
| Bird netting | 1/4" mesh plastic or cloth | Under eaves, around roof openings | birds, bats |
| Borax | 20 Mule Team® | Mopping, cleaning, etc. | odors, termites, ants, weeds, roaches, etc. |
| Brick | Use a strong mortar. | Protective barrier for structural wood. | rats, mice, most insects |
| Caulking | Whichever you use, it must be flexible; silicone-type works best. | Fill cracks and small holes in wood, masonry and plaster. | spiders, carpenter ants, wasps |
| Cement | 1:2:4 mixture | Patch holes in walls or construct barriers. | rats, mice, insects |
| Door sweeps | Metal; leaves less than 1/4" gap. | Close gaps at bottom of doors. | rats, roaches, spiders, mice, bats |
| Duct tape | Heavy duty | Temporary seal for large cracks, holes, seams. | bats, most crawling insects and arachnids. |
| Earth Cards/negative ion plates | All types | All types | Most insects |
| Enzyme Cleaner | Safe Solutions, Inc. | Spray drains and cleans virtually everything. | Almost all odors, mites, insects, arachnids, fungus, mold, mildew and bacteria. |
| Expanded metal | Heavy gauge galvanized metal or aluminum, mesh less than 1/4" | Cover vents, large openings. | rats, mice, bats |

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|----------------------------|--|---|---|
| Glass jars | Must have screw-on metal lids or tight-fitting plastic lids; jars with rubber seals and snap caps work best. | Line cans, store small quantities of dried foods, sugar, honey. | stored-food pests, ants, wasps (outdoors), mice, rats |
| Hardware cloth | 1/4" mesh or smaller, 19 gauge galvanized metal | Ventilators, louvers, large openings, vents. | mice, rats, bats, birds |
| Hydraulic cement | commercial grade | Fills cracks in masonry and concrete. | moisture, rodents, crawling insects |
| Insulation (fiberglass) | Roll or blow-in type | Attics, wall voids. | bats |
| Metal flashing or sheeting | 19 gauge galvanized metal or aluminum; slots should be 1/4" in width or smaller. | Cover vents, large openings. | rats, mice, bats |
| Mortar | 1:3 mixture | Fill cracks in masonry and concrete. | rats, mice, crawling insects |
| Peppermint soap | Safe Solutions, Inc. | Safely repels/kills. | most insects |
| Perforated metal | Heavy gauge galvanized metal or aluminum openings should be 1/4" in width or smaller. | Cover vents, large openings. | rats, mice bats |
| Plastic bags | Heavy-duty type (seal properly) | Store linens, cans, woolens, cereals, sugar, flour, other dried foods and sugary foods. | clothes moths, carpet beetles, ants, cockroaches |
| Plastic containers | With tight-fitting lids. | Store small quantities of dried nuts, grains, sugar, syrup, honey | stored-food pests, ants |
| Putty | Nonshrinking, weatherproof, silicone-type works best. | Fill cracks and small holes in wood masonry and plaster. | ants, cockroaches, spiders, wasps |

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|---------------------|--|---|---|
| Salt | table | Spray or wash. | lice, weeds, most insects |
| Self-expanding foam | In aerosol cans. | Fill large voids and irregular openings, seams in corrugated tile and metal roofing. | bats, ants, cockroaches |
| Silicone rubber | Caulking type. | Fill cracks and small holes in cabinets, baseboards, moldings, around windows, tubs, other areas. | ants, cockroaches, spiders, wasps |
| Steel wool | Fine grade (#00) tightly packed into hole; dust with boric acid, then seal with caulking. (Better to use copper wool.) | Plug holes in wood (will rust if not caulked properly). | carpenter ants, carpenter bees (Can be used to temporarily plug holes to exclude mice.) |
| Talcum powder | baby powder | Wherever you see ants, roaches, etc. | Many insects and mammals are controlled or repelled. |
| Tide soap | dry laundry powder | Wherever you see ants. | ants, etc. |
| Weather-stripping | Rubber or felt | Seal cracks around doors and windows. | bats, ants, cockroaches, spiders, other small insects |
| Window screening | Galvanized metal or aluminum. | Vents, windows, doors. | bats, birds, spiders, flies, bees, wasps, mosquitoes, other flying or crawling insects. |



INCOMING MATERIAL INSPECTIONS. Since 1850 the number of non-native insect species has expanded over 10-fold. Of these, over 200 have become serious pests and over 500 have become lesser pests. Open up all containers and/or items and then inspect all materials brought into a building for hidden pest infestations. For example, firewood may harbor carpenter ants, spiders, cockroaches, wood-boring beetles, termites or similar pests, or eggs of some pests. Furniture, rugs and other items moved from an infested building can be contaminated with cockroaches, carpet beetles or fleas. Visiting pets, e.g., dogs and cats, bring fleas and ticks. Food and office supplies can contain roaches, firebrats, silverfish and the like. The mail room, wood shop and front office areas should also be inspected. All supplies such as paper, copier paper, envelopes, stationary and other boxed office supplies should be removed from their shipping boxes as soon as possible. Stockpiling of supplies should be avoided. The longer susceptible material sits in a storage area, the more likely the chance of an infestation occurring. There is no

such thing as “privacy” or “sacred space” if you really want pest control.

Storage areas are full of dark, quiet zones such as corners, underneath bottom shelves and behind furniture that insects and rodents love so much. These are areas the custodial staff tend to miss when vacuuming and cleaning. Particular attention must be paid to routine cleaning of storage rooms with Safe Solutions, Inc. enzymes and borax. Dust, dirt, hair, paper and other debris tend to accumulate in these inaccessible areas. A good “spring cleaning” should occur every 3 months. Cleaning staff should be told where problem areas are located and how thoroughly they should be cleaned. Inspect these same areas after cleaning has been completed.

If some supplies are to be stored for long periods of time, make sure they are bagged in plastic and sealed prior to being placed in storage so that any pests in the bags will not be able to get out and infest the entire area and/or nothing can get into the bag to start an infestation.

Shelving units are notorious for sheltering pests. Infrequently-used boxes of materials stored on shelves should be sealed in polyethylene bags, dated and labeled. During a storage room inspection, one should look on, under and behind all of the shelves and/or pallets for any piles of fine dust, nests, shed skins of insects, casings and other debris, rodent feces and dead or live insects or rodents. Note: Many air filters are impregnated with a biocide to *improve* the ambient air quality; we do not suggest their use.

WAYS SOME PESTS GAIN ENTRY INTO BUILDINGS. Pests may gain entry by being carried in on items such as those listed here.

| ITEM | PESTS |
|-----------------------|--|
| Appliances | Mice, cockroaches |
| Books/papers | Cockroaches, silverfish, firebrats |
| Cardboard containers | cockroaches, silverfish, firebrats, stored-product moths, spiders, mice, rats (occasionally) |
| Carpets/rugs | Carpet textiles, fleas, cockroaches, clothes moths |
| Clothing | Clothes moths, lice, fleas, carpet beetles |
| Cut flowers | Carpet beetles, spiders |
| Firewood | Spiders, wood-boring beetles, termites, carpenter ants, cockroaches |
| Fruits/vegetables | Fruit flies, spiders, ants |
| Furniture | Spiders, wood-boring beetles, cockroaches, fabric pests, fleas, sometimes mice |
| Grains/cereals | Stored-product beetles and moths, cockroaches, mice in bulk containers |
| Groceries/dry goods | Cockroaches, spiders, silverfish, firebrats, mice, rats (occasionally) |
| Lights near entrances | Spiders, carpet textiles, flying insects |
| Pets | Fleas, ticks |
| Plants | Ants, spiders, mites |
| Vacuum cleaner bags | Fleas, cockroaches, carpet beetles, fabric pests |

Moisture - Control the moisture and you control the pest. At 80% relative humidity, conditions are conducive for mold to start growing. Ventilation, dehumidifiers and/or air conditioners can be used to control many problems, e.g., insects, spiders, mildew, mold, rot, rust, condensation, peeling paint, etc. You usually find more pest and mold infestations in damp basements, bathrooms and kitchens than you do in warm, dry attics. Ventilation alone will not usually be enough of a corrective measure as it does not address the issue of the relative humidity. Condensation forms at 100% relative humidity. Find the sources of the moisture and then correct them in addition to the use of dehumidifiers, vents and/or air conditioners.

Closely examine all incoming bulk containers for cockroaches and stored-product insects. Small packages of certain items suspected of being infested can be placed in a freezer for a few days to destroy insects. Persons responsible for purchasing can help by only purchasing pest-free merchandise. Some manufacturers are now using pheromone traps in shipping containers as a way of monitoring the pest-free status of their products. Routinely clean with Safe Solutions Enzyme Cleaner with Peppermint.

Inspection Note: Finding insects won't be hard; at any given time a billion, billion insects populate the planet. The body weight of all the world's insects outweighs the combined weight of the rest of the entire animal kingdom including mankind. While approximately 1 million insect species have been described, it has been estimated another 30 million species remain unidentified. Each year some 8000 new species are discovered. Have fun on your inspection - you may find a new species.



“Haste is of the Devil” — St. Jerome

Note: Cedar shake roofs, especially those with shallow pitches and those who retain moisture because of shade, can really create a host of pest problems, e.g., brown recluse spiders, earwigs, wood cockroaches, paper wasps, carpenter ants, silverfish, spring tails, fungus beetles and parasitoid wasps.

“There is always an **“if”** in **LIFE**. If you do not learn to use your brain rather than pesticide **POISONS**, you will not have much of a life! SLT.



*Safe Solutions products may be purchased online at:
<http://www.safesolutionsinc.com>
or by telephone at:
1-888-443-8738.