

Integrated Pest Management Process for Bed Bugs

Policy and Procedure Guide of the Housing Authority of the City of Meadville

The Housing Authority of the City of Meadville (hereinafter H.A.C.M.) recognizes the importance of pest control in providing a decent, safe and sanitary environment for its residents. To achieve this control, H.A.C.M. has adopted this Integrated Pest Management (hereinafter IPM) process for bed bugs for all its public housing sites and AMPs. This process will be implemented in accordance with generally accepted IPM guidelines provided by the U.S. Department of Housing and Urban Development (hereinafter HUD), including HUD's guidance provided in PIH Notice H2012-5 and PIH Notice 2011-22. Additional considerations have been given to PIH Notice H2011-20, a bed bug survey in New Jersey in 2014 conducted by Rutgers University involving 2,372 low-income apartments and the ATAHG program currently being used by the Philadelphia Housing Authority. In all cases, *inspection, identification, treatment* and *ongoing evaluation* are key.

According to StopPests.org, as recommended by HUD in PIH Notice H2011-20, IPM of bed bugs includes educating residents and staff, preventing new infestations, proactively monitoring and inspecting, treating with various chemical and non-chemical control tools, and evaluating the success or failure of ongoing treatments.

Bed bugs were common pests prior to WWII but were quickly brought under control shortly afterwards thanks to the advent of modern synthetic insecticides. Unfortunately, over time, bed bugs have developed resistance to these insecticides and there has been a resurgence particularly during the past 15-20 years. Although bed bugs are not known to transmit blood-borne diseases, they do cause a lot of stress to people. The Centers for Disease Control and Prevention (hereinafter CDC) and the Environmental Protection Agency (hereinafter EPA) classify bed bugs as a pest of public health significance.

Orkin's Bed Bug Cities list for 2023 includes 7 of the largest cities surrounding H.A.C.M. Chicago is listed as #1 in the nation for bed bugs. New York City is #2, Philadelphia is #3, Cleveland / Akron area is listed as #4, Pittsburgh is #18, Youngstown, OH is #27 and Buffalo, NY is #29. Many of H.A.C.M.'s applicants, and subsequent residents, hail from these 7 areas. The Rutgers University study found that some of the reasons why bed bugs are common in low-income housing include a lack of resident cooperation (specifically: clutter and infrequent laundering) and ineffective treatment (specifically: not having an IPM and a lack of proper follow-up service).

Inspection / Identification

Per the Rutgers study, if >5% of apartments are infested in a building, periodic, building-wide inspections are recommended.

Visual Inspection – All units are to be visually inspected by trained H.A.C.M. staff and/or outside exterminator company personnel upon initial lease-up and quarterly thereafter. Visual inspection, per the Rutgers study, can identify 50-75% of all bed bug infestations.

Climb-up Interceptors – All units are to be equipped with climb-up interceptors, placed under all feet of the bed and couches. In conjunction with visual inspection, climb-up interceptors can detect 90% or more of all bed bug infestations according to the Rutgers study. StopPests.org reports that studies have shown that passive bed leg monitors with a pitfall trap design can detect 95% of infestations.

SenSci Active Volcano with a lure – Bed bugs are attracted to carbon dioxide, what humans breathe out. Placement of one SenSci Active Volcano with a lure near the sleeping area can be used to draw any bed bugs out of hiding, further increasing H.A.C.M.'s odds of identifying an infestation. These will be reserved for units already being treated, but nearing clearance, to ensure they have been fully cleared prior to being released from active treatment.

All monitors are to be checked one week after being placed, one month later and, quarterly thereafter unless a tenant reports any bed bug activity. Residents must be educated and encouraged to report any bed bug activity as soon as possible. Any bed bug activity noted around the monitors is to be reported to H.A.C.M., either to their Property Manager or the Maintenance Superintendent, and is to be acted on by H.A.C.M. within 5 business days to confirm bed bug activity.

According to the Rutgers study, compared with canine detection, using visual inspection plus monitors is much more economical and accurate.

Bed bug proof mattress encasement – These will be provided by the H.A.C.M. to tenants with confirmed infestations. In the event that the bed bug infestation rate at Holland Towers exceeds 20% of all units, then all residents will be provided a bed bug proof mattress encasement that is to be sealed across the zipper with duct tape. H.A.C.M. Maintenance staff should oversee and/or assist as needed. Mattress encasements do not prevent bed bug infestations but they do make it easier to visually inspect for bed bugs and they also help preserve the tenant's mattress so it is less likely to need to be disposed of in the case of a new infestation. Mattress encasements should be checked for wear during the quarterly inspections and resealed with duct tape if torn. H.A.C.M. will provide one mattress encasement per tenant per year. Chemically treated mattress encasements (e.g. ActiveGuard) may be considered by H.A.C.M. at some future date but are not currently considered necessary.

The Maintenance Superintendent shall maintain a detailed spreadsheet listing every unit address, mattress size(s) and date mattress encasement was provided. Additionally, a running history shall be maintained detailing the condition of the mattress encasements at each inspection, any repairs that were made and date mattress encasements were replaced.

Treatment

When bed bug activity has been identified in a unit, adjoining units on either side shall be inspected, regardless of when their next quarterly inspection may be, monitored and treated if any bed bug activity is found. This is according to PIH Notice H-2011-20. StopPests.org recommends the additional step of including the unit directly across the hall in the accelerated inspection, monitoring and treatment, if necessary. H.A.C.M. is taking it a step further still by adding the units directly above and below in this grouping. Thus, for all identified bed bug activity, the units on either side, the units directly above and below, and the unit across the hall, if applicable, will be inspected, receive more frequent monitoring, checking the climb-up interceptors ***weekly until the unit with the identified bed bug activity is brought under control and cleared to be bed bug free.*** Additionally, the units receiving the increase in monitoring will be treated with silica gel dust (diatomaceous earth), even if they show no signs of bed bug activity, to help prevent any bed bugs from the unit with the known bed bug activity from migrating there.

When bed bug activity has been confirmed in a unit, the tenant may expect treatment to begin within a reasonable amount of time of the verified inspection. HUD recognizes that, depending upon the form of treatment, staffing and exterminator company limits, it may take several weeks for treatment to begin. Tenants are to be notified in writing 48 hours prior to their first treatment.

Upon confirmation of bed bug activity, tenant is to be provided “***Bed Bug Treatment Preparation Sheet***” detailing how they can assist the H.A.C.M. by getting their unit prepped ***prior to*** actual treatment. Tenant is also to be provided an instruction sheet on ***Laundry Guidelines with Bed Bugs*** to help bring their infestation under control. An H.A.C.M. licensed exterminator will go over both set of instructions with the tenant(s) and answer any questions they may have. Tenants with confirmed bed bug activity are also to be given a copy of “***Activity Guidelines & Restrictions***” which notifies them to refrain from congregating in the common areas, from visiting other units and from entertaining guests in their unit until their unit has been confirmed to be free from bed bugs, as documented by receipt of a signed “***Exterminator Cleared Notice.***” Understanding of the first 3 notices is to be documented by having each signed by the tenant. All 3 notices are to be in a 2-part format with tenant getting a copy and the other copy going in the tenant file.

Chemical spray – This is to be applied by a licensed exterminator and may be accomplished in-house or by an outside extermination company. Materials Safety Data Sheets (hereinafter MSDS) will be maintained by H.A.C.M. for all chemicals used.

Units with confirmed bed bug activity will be treated according to the plan determined by the in-house exterminator or the outside extermination company. Typically, chemical spray treatments are done for a minimum of 3 consecutive visits. However, depending on the severity of the infestation and the level of cooperation from the tenant(s), more visits may be required.

Steam – Steam forms from water at 212 degrees Fahrenheit. Both adult bed bugs and bed bug eggs will die within minutes at 122 degrees Fahrenheit. Steam is to be used to assist with killing bed bugs and bed bug eggs on bedding, mattress encasements, fabric furniture cushions, drapes and carpet when called for. This is NOT the same thing as whole unit heat treatment. It is NOT intended as a substitute for chemical treatment. Rather, it is meant to be used as a secondary layer in addition to chemical treatment. It may be used in lieu of chemical spraying for tenants with a documented chemical sensitivity. However, it is not meant to be used as the primary treatment method because it has no residual effectiveness after the steam is stopped.

Silica gel dust (Diatomaceous earth) – Silica gel dust is to be applied into wall voids and hard to reach places. This helps to contain the infestation, preventing bed bugs from running to nearby units. This is to be utilized in all units with confirmed bed bug activity **and** adjacent units (the units on either side) **and** the units directly above and below **and** directly across the hall *even if there is no confirmed bed bug activity in the adjacent units, the units above and below, and/or the unit across the hall*. **Silica gel dust is to be confined to wall voids and hard to reach places so as to minimize any risk of inadvertent inhalation by the residents.**

Laundry – Tenants will be instructed to implement frequent laundering and **hot drying**. A written instruction sheet will be provided.

Tenants should NOT attempt to apply any chemical sprays of their own as these are likely to interfere with the H.A.C.M. IPM process.

Previously confirmed units with no further evidence of bed bug activity will be placed on a “45-day clear.” If they remain bed bug free for that entire time period, they will be given an “Extermination Cleared Notice” and are then free to resume their normal activities.

Summary

Inspection / Identification / Prevention

- Visual Inspection – at time of lease-up and then quarterly thereafter
- Climb-up Interceptors – under all feet of beds and couches
- SenSci Active Volcano with a lure – reserved for units already being treated, but nearing clearance - one per sleeping area
- Bed Bug Proof Mattress encasement – In the event that the bed bug infestation rate at Holland Towers exceeds 20% of all units, one per resident per year – to be inspected at time of lease-up and then quarterly thereafter

Treatment

- Confirm bed bug activity – *within 5 business days*
- Inspect adjacent units (one on either side) and unit across hall (if applicable)

- Forms – Bed Bug Treatment Preparation Sheet, Activity Guidelines & Restrictions With Bed Bugs Sheet, Laundry Guidelines With Bed Bugs Sheet.
- Chemical spray
- And/or
- Steam treatment
- Frequent laundering and hot drying by the tenants.

Silica gel dust (Diatomaceous earth) – this is to be applied to all units with confirmed bed bug activity **and** adjacent units (the units on either side) **and** the units directly above and below **and** the unit directly across the hall *even if there is no confirmed bed bug activity in the adjacent units, the units above and below, and/or the unit across the hall*. **Silica gel dust is to be confined to wall voids and hard to reach places so as to minimize any risk of inadvertent inhalation by the residents.**

Prevention

Tenants are to be educated and encouraged to be aware of their surroundings and to understand their role in keeping the H.A.C.M. bed bug free. Bringing in used furniture is to be discouraged. However, if tenants do wish to bring in used furniture, it should be thoroughly inspected by trained H.A.C.M. staff first. Tenants should report any signs of bed bug activity to H.A.C.M. staff as soon as they notice any.

H.A.C.M.'s expectation is that tenants with confirmed bed bug activity refrain from loitering or gathering in the common areas such as lobbies and community rooms. This means not gathering in groups or singly to wait for the mailman, not attending public meetings and not attending public social events. H.A.C.M. expects that tenants with confirmed bed bug infestations will limit their time in common, public areas to 5 minutes or less. Furthermore, H.A.C.M. requests tenants with confirmed bed bug infestations to refrain from entertaining guests in their units and to refrain from visiting other residents in their respective units as well. These guidelines should be followed until they have been confirmed to be free from any further bed bug activity.

Library Procedures

The H.A.C.M. library is outfitted with a book return box. The book return box has been set up such that it has a bag in it so returned books drop directly into the bag. Once per week, an H.A.C.M. in-house exterminator will remove the filled bag and replace it with a fresh bag. The removed, filled bag will be placed into a tote and treated chemically. After 72 hours in the sealed tote, books will be returned to the library for lending again. A log sheet will be maintained and kept on the treatment tote.

Only tenants with no known bed bug infestations will be allowed to borrow books from the H.A.C.M. library. The library is accessible by fob and tenants with confirmed bed bug infestations will have their library fob access turned off until they have been verified to be free from bed bug activity per a signed Extermination Cleared Notice.

The library is for tenant use only; no aides, family members or visitors are permitted to access it.

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Bed Bug Treatment Preparation

1. Preparation requires the tenant to strip the bedding on the morning of the extermination treatment. All linens should be placed into heavy duty garbage bags to be laundered and dried with high heat according to the Laundry Guidelines With Bed Bugs sheet that you signed. (Reminder: The bags should be disposed of directly into the dumpster and not be re-used.) When done, place freshly laundered, high heat dried items in sealed containers or heavy-duty garbage bags and set in bath or kitchen area out of the way of treatment zones.
2. Do not remove any furniture, including bedside stands, dressers, chairs, sofas, pictures or any part of the bed frame, mattress or box spring unless advised to by the H.A.C.M. in-house, or outside contracted exterminator.
3. **Remove all materials from the floor and out of the closets and from INSIDE and ON TOP OF dressers and nightstands.** Hanging clothes can remain unless fogging or other self-treatment has already been done because those types of self-treatments tend to drive the bed bugs into the closets. If that is the case, then launder those clothes as well, per step 1. Items that cannot be run through the laundry and dried on high heat are to be put in heavy-duty garbage bags or clean, plastic totes for treatment and left in the room.
4. Open any sofa beds and remove any loose covers that may be on any upholstered furniture. Launder as per step 1.
5. Remove all small area rugs and launder as per step 1.
6. Remove all children's toys from area and place in plastic containers or bags. Stuffed animals should be placed in dryer on high heat for 30 minutes.
7. **Remove all stored items from under the beds** but leave items in the rooms for treatment by putting in plastic totes or heavy-duty garbage bags but **DO NOT** tie them up (only filling 2/3 full). Bags will be treated. **DO NOT OPEN** bags for a **minimum** of 72 hours or longer depending on how high the activity level is. If disposing of items, they must be wrapped in plastic to be removed from the unit to prevent cross contamination.
8. Cover all fish tanks and animal cages. Remove birds and bird cages from areas to receive treatment. Aquariums may remain in place as long as the filtration and aeration systems are turned off and the tank covered with a wet towel. Filtration and aeration equipment can be turned back on 6 hours following the bed bug treatment.
9. Remove pet bedding and launder per step 1.
10. People and pets must leave the unit and not re-enter until: 6 hours after the initial service and 3 hour after continuing treatments.

Please keep bed and furniture pulled away from walls until all follow-ups are complete and unit has been given an "Extermination Cleared Notice".

Activity Guidelines & Restrictions With Bed Bugs

Each of us must look out for all of us.

According to the CDC, bed bugs are small, flat, parasitic insects that feed on the blood of people and animals while they sleep. They can spread from place to place as people travel or share living quarters. This can occur by accidentally brushing up against another person with bed bugs already on them, sitting or lying down on furniture where bed bugs have set up shop or simply from bed bugs that have fallen off infested hosts that then crawl onto others who are nearby. In order to help prevent the spread of bed bugs, H.A.C.M. strongly recommends the following: that tenants with confirmed bed bug activity refrain from loitering or gathering in the common areas such as lobbies and community rooms. This means not gathering in groups or singly to wait for the mailman, not attending public meetings and not attending public social events. H.A.C.M. recommends that tenants with confirmed bed bug infestations limit their time in common, public areas to 5 minutes or less. Furthermore, H.A.C.M. strongly advises tenants with confirmed bed bug activity to refrain from entertaining guests in their units and to refrain from visiting other residents in their respective units as well. These restrictions apply until they have been confirmed to be free from any further bed bug activity.

If you are being asked to sign this document, it is because your unit has been confirmed to have bed bug activity. Please do your part to prevent spreading bed bugs. Intentional disregard of this notice could constitute a lease violation.

Signed: _____

Date _____

Laundry Guidelines With Bed Bugs

Frequent laundering and hot drying are something tenants with confirmed bed bug activity can do to help the H.A.C.M. in treating their infestation. Drying with a high heat for 30 minutes has been shown to be effective in reducing bed bug infestations.

Carry your dirty laundry to the laundry room in a disposable bag. **Do NOT use the same bag to carry your dirty laundry to the laundry room and then your clean laundry from the laundry room back to your apartment.** Dispose of the dirty laundry bag directly into the dumpster and then use a clean bag to bring your clean laundry back into your apartment.

Laundry, including all bedding, should be done weekly hereafter.

Signed _____ Date _____

Extermination Cleared Notice

Date: _____

Tenant Name: _____

Tenant Address: _____

Congratulations! According to H.A.C.M.'s recent inspection by our in-house exterminator, your apartment is now free from bed bug activity. You can resume your regular activities; but we urge you to be mindful of where, and with whom, you gather because it is easy to become re-infested. We appreciate your cooperation during this difficult process; we know it has not been easy giving up your daily routine. Thank you for your continued patience as we strive to improve our environment for everyone.

H.A.C.M. STAFF

Signature

Date

Printed Name

Tenant

Signature

Date

Printed Name

Integrated Pest Management Process for Rodents & other Insects

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The Housing Authority of the City of Meadville (hereinafter H.A.C.M.) recognizes the importance of pest control in providing a decent, safe and sanitary environment for its residents. To achieve this control, H.A.C.M. has adopted this Integrated Pest Management (hereinafter IPM) process for rodents & other insects for all its public housing sites and AMPs.

Inspection / Identification

When notification is made by a tenant, family member, aide or H.A.C.M. staff member, a work order shall be placed for inspection by the H.A.C.M. licensed exterminator. Tenants are encouraged to place a sample of any insect or rodent infestation in a baggie, jar or on a piece of tape for review to help the exterminator identify the type of infestation. Monitors will then be strategically placed in areas of the affected unit. Treatment and preparation will vary according to the type of infestation. Any rodent and/or other insect activity identified is to be reported to H.A.C.M., either to their Property Manager or the Maintenance Superintendent, and is to be acted on by H.A.C.M. within 5 business days to confirm such activity.

Adjacent units may also be inspected and treated as a preventative measure depending on the type of infestation. Affected tenants are to be notified in writing 48 hours prior to inspection by H.A.C.M. staff.

Treatment

When rodent and/or other insect activity has been confirmed in a unit, the tenant may expect treatment to begin within a reasonable amount of time of the verified inspection. HUD recognizes that, depending upon the form of treatment, staffing and exterminator company limits, it may take several weeks for treatment to begin.

Treatment is performed by an H.A.C.M. licensed exterminator. Typically three treatments will occur within a period of one month. Additional inspection and treatments may occur based upon the level and frequency of activity during the initial process.

Tenants are to be notified in writing 48 hours prior to their first treatment.

Cockroach Treatment

Your unit has been identified as having cockroaches, you will be scheduled for an initial treatment on _____ to assist with eliminating the cockroaches, we encourage you to do the following to help prep for your treatment:

- Clean all kitchen cabinets out, remove all items and wipe out.
- Sweep all floors before treatment, and every day after treatment to keep up with all the dead cockroaches.
- Clean out all appliances: microwave, fridge, oven. (have top of fridge cleared off)
- Empty all trash cans and keep up with taking out trash daily.
- Clean out bathtub and all sinks bath and kitchen.
- Move all furniture away from the wall for initial treatment.
- Residents are encouraged not to use sprays, powders, or pesticides because they can counteract the safer products used by the H.A.C.M licensed exterminator.
- After treatment, monitors will be placed in areas for further review and inspection.
- Cleaning, sanitizing, removing clutter and vacuuming are most effective with the eradication of insect treatment.

While the treatment is going on you must remove all pets from the unit. As well as staying out of the unit for 4 hours once treatment was completed. The time will be posted on your door for re-entry.

If you have any questions, call Maintenance at (814)-336-3177 Extension 108.

Rodents & other Insects Treatment Preparation

1. Residents are required to empty and clean their kitchen cabinets, below the bathroom sink and any other areas where there are signs of activity or infestation.
2. Clearing and cleaning off the tops of the refrigerator, stove and other appliances is required for a more detailed inspection and treatment.
3. If an adjacent unit is being inspected and a preventative treatment is being conducted, at a minimum they will need to clear below the kitchen and bathroom sinks.
4. After treatment, monitors will be placed in areas for further review and inspection. When an access or travel point has been determined, these areas will be sealed by the H.A.C.M. to prevent additional infestation and nesting. Rodent traps should be checked often, daily if possible.
5. Residents with confirmed activity must also clean areas free of grease, food debris, standing water and excessive storage.
6. Residents must remove items such as bags and cardboard boxes which can become nesting areas.
7. **Upon removal of dead insects, rodents and their debris the area MUST be thoroughly cleaned and sanitized by the residents.**
8. Residents are encouraged not to use any sprays, powders or pesticides because they can counteract the safer products used by the H.A.C.M. licensed exterminator.
9. Cleaning, sanitizing, removing clutter and vacuuming are most effective with the eradication of insect and rodent activity.
10. In some cases of infestation such as meal moths, fruit flies and drain flies, these insects are generally eradicated without treatment by determining the source and cleaning the areas affected.

To be created: guidelines for outside agencies who rent from the HACM

To be created: guidelines for tenants who get relocated during renovation process stating how long (one year?) they must remain infestation-free before getting moved into a newly renovated unit.