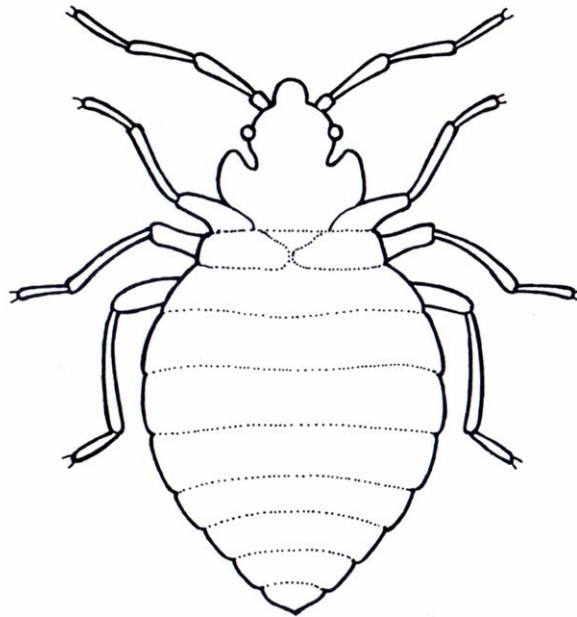


# **Bedbugs:**



## **Guidelines for Best Practices in Prevention and Treatment**

*July 2006*

*Produced by Bay Area LISC and the Bedbug Task Force*

**LISC**  
Bay Area



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## **INTRODUCTION**

Bedbugs are back. The common bedbug (or bed bug), *cimex lectularius*, long absent from the Bay Area and the rest of the United States, is back with a vengeance. In San Francisco, Oakland, and cities throughout the country, buildings ranging from SROs to luxury hotels are battling bedbug infestations. The bugs spread easily, hide well, reproduce quickly, and are hard to treat. In all prevention and treatment of bedbugs, it is important to be proactive and thorough. The best bet for property managers is to vigilantly and proactively work to prevent infestations and if one is discovered, treat it immediately.

This document is a product of the Bedbug Task Force, a coalition of affordable housing property managers, public health officials, and others brought together by Bay Area LISC to share experiences and suggestions in dealing with bedbugs. These guidelines are just that – a document intended to give property managers *guidance* – but are by no means an exhaustive resource in all aspects of bedbug management. There is no one-size-fits-all solution, but the collective wisdom compiled herein should be a great start. Good luck!

## **BIOLOGY AND BEHAVIOR**

**2.1 :: Life Cycle and Reproduction.** Bedbugs go through various stages during the course of their life cycle. They begin as eggs, hatching sometime between 6 and 17 days after they are laid. They emerge from the eggs as nymphs and begin feeding immediately. After its first meal, a bedbug will molt and grow to its next stage of development, and begin feeding again. After five molts, the bedbug reaches maturity and begins to reproduce. A female bug lays between one and twelve eggs per day and may lay up to 500 in her lifetime.

**2.2 :: Survival.** Bedbugs are extremely hardy, and can live up to 18 months without eating once. This means that bedbugs can be found in long-vacant rooms or abandoned furniture. Even uninhabited rooms must be treated aggressively.

**2.3 :: How They Travel.** Bedbugs are nocturnal and spend the daytime hiding in cracks and crevices in walls, floors, and ceilings; in furniture and clothing; in seats in theaters, taxis and on public transportation; and in any number of other areas. They cannot fly, but run quickly and are small enough to easily go unnoticed. They are usually introduced into a new space in one of three ways:

1. By falling, climbing, or jumping (they can jump no more than three inches) onto a person's clothing or belongings when he or she comes into contact with an existing infestation, allowing the bug hitch a ride to a new home.
2. When someone brings used furniture, clothing, or another item that is harboring bugs into the space.
3. By spreading through walls and floors from an adjacent infested unit.

For more information on where bedbugs hide, see Section 4.2.

**2.4 :: Feeding Behavior and Bites.** Bedbugs are nocturnal. They hide during the day, but come out at night to feed, usually reaching the peak of their activity about an hour before dawn. They are attracted to their victims by carbon dioxide and warmth. It takes a bug



between 3 and 15 minutes to feed, depending on its age. When a bedbug bites, it injects saliva to prevent blood clotting and to numb the area. For nearly all people, the bites are painless and go unnoticed until a few hours later when irritation begins. Different people react differently to the bites: some more seriously, and others not at all. Most people develop itchy welts roughly comparable to those of a flea or mosquito bite. One telltale sign of bedbug bites is a series of three bites in a row – sometimes referred to as “breakfast,” “lunch,” and “dinner” – but bedbugs do not always bite in this pattern. The bites are usually concentrated on the upper body, especially on the face, neck and arms. Bedbugs are not known to transfer any diseases, and the bites are generally not at all dangerous, though in serious cases, excessive scratching may damage skin and a large number of bites may lead to mild anemia.

## **PREVENTION**

### **3.1 :: Prevention during Construction or Rehab.**

- Caulk, foam, seal, paint, and otherwise fill any cracks and holes in the walls, ceilings, floors, and furniture. Reglue any loose wallpaper and patch cracked or peeling paint.
- Eliminate any bird, bat, squirrel, rat, mouse, and other animal pests in the building, as these animals can be a vector for the bugs.
- Drill and treat wall cavities and the space beneath floorboards with diatomaceous earth or boric acid, both of which inhibit the spread of an infestation to neighboring units through the walls and floor. They are powders that will kill any bugs that come in contact with them; diatomaceous earth also serves as a repellent. Diatomaceous earth should *not* be used on top of carpets, bare floors, furniture, or any other place in which it will come in direct contact with people or can be stirred up and inhaled. For more information on both diatomaceous earth and boric acid, see Section 5.1.2.
- Install hard floors (wood, tile, linoleum, etc.) instead of carpets or rugs if possible. If you do have carpets, treat the carpets with boric acid powder specifically labeled for use on carpets (such as flea powder), and take care to follow all warnings and instructions on the product.
- Furniture:
  - Do not use built-in furniture, as it can prevent exterminators from reaching the bugs’ hiding places.
  - Buy new furniture whenever possible, and check used furniture thoroughly to be absolutely sure that there are no bugs or eggs. As a precaution, you may want to place the furniture in a freezer or carbon dioxide tank before bringing it into the building to kill any potential bugs and eggs.
  - Avoid upholstered furniture. Opt instead for leather or vinyl. If upholstery is unavoidable, try to prevent bugs from reaching it by ensuring that the furniture stands on metal legs and that the fabric is at least a few inches from the floor and from any other pieces of furniture.
  - Discard any mattresses and box springs with tears, holes, or other apertures that would allow bedbugs to hide and lay eggs inside.
  - Use metal or laminate bed frames, bookcases, and other furniture instead of wood. Bedbugs cannot climb up slick surfaces like metal and glass, and such materials generally do not provide as many cracks, screws, and other hiding places for the bugs.



- Use vinyl, anti-allergy, or other covers on mattresses.
- Do not use bed skirts that drape down and touch the floor.

### **3.2 :: Prevention in Occupied Buildings**

#### **3.2.1 :: Preliminary Measures**

- Follow all procedures outlined above in “Prevention during Construction or Rehab.”
- Assign responsibility to staff members for various tasks, including educating residents, laying out legal disclosures and procedures, performing inspections, and performing treatment of minor infestations. See Appendix A for a sample protocol.
- Contract with a pest controller to provide monthly inspections and/or provide treatment in the event of an infestation.
- Contract with a lawyer to draft an addendum, lease agreement, and other legal documents. See Section 6 for more information.
- Hold a staff training session for all staff involved to educate them about bedbugs: how to detect them, how to prevent infestations, how to prevent spreading once an infestation has been discovered, how to proceed with treatment, how to work with uncooperative residents, etc.
- Provide sealable plastic bins for storage. Such bins are invaluable both in preventing the spread of infestations and in facilitating treatment. Though purchasing these bins requires a small up-front cost, it can save a great deal of money in the long run. The more cluttered and the less organized someone’s belongings are, the more difficult and expensive treatment becomes.
- Make vacuum cleaners available to tenants so they can regularly vacuum their units. If you have a choice, opt for bagless vacuum cleaners that will be emptied into plastic bags and sealed after every use.
- Consider offering free laundry service to residents to encourage them to wash clothes and bedding on a regular basis. This too can potentially save a great deal of money in the long run.
- Use sticky traps in units and throughout the building to monitor for any infestations before they become severe. This is a cheap and very effective way to catch an infestation as soon as it begins. Educate tenants on the use and importance of the traps. You should always check the traps for bugs during monthly inspections, and may, in addition, want to ask the tenants to check the traps themselves.

#### **3.2.2 :: Education of Residents**

- Educate residents on the nature of the problem, the severity of an infestation, the need to treat it proactively, and preventive steps that can be taken to avoid getting bedbugs in one’s room.
- Stress to residents that bedbugs are not a sign of poor hygiene, and thus not something to be ashamed of. They can affect anyone anywhere. Encourage the residents to come forward with infestations so that the bugs can be treated, and emphasize that there will be no punitive measures.
- Hold an informational meeting. Have a pest controller speak at the meeting. Perform outreach to any residents not in attendance.



- Provide educational literature (FAQs, “Bedbug Basics,” etc.) and information on building procedures to all residents
- Establish rules and/or guidelines for residents. For example:
  - Do not enter an infested room.
  - Do not pick up used furniture
  - If you pick up used clothes or bedding, be sure to wash and dry them on the hottest possible setting *before* bringing them into your unit.
  - If you suspect you’ve been in contact with bedbugs, wash and dry all clothes on the hottest setting possible. Thoroughly vacuum backpacks and any other belongings. Notify a building manager immediately.
  - Wash clothes and shower regularly.
  - Store clothes in plastic bins. (These are something that managers may want to provide).

### 3.2.3 :: Procedures with Move-Ins

- Sign agreement. (See Appendix B.)
- Provide information about bedbugs and prevention/treatment procedures at initial interview.
- Before a new resident moves in, treat rooms with desiccating dust like limestone dust (for example, Nic-325) for carpets, mattress folds, box-springs, and upholstery, or diatomaceous earth for wall cavities, light-switch plates, and cracks and crevices. (See Section 5.1.2 for detailed information on diatomaceous and other treatments, including health and safety concerns.)
- Encourage new residents to talk about potential exposure they may have had to bedbugs, perhaps through the use of a survey.
- Have new residents launder all clothes and shower before being admitted to their new unit.
- Consider designating a freezer to hold move-ins’ belongings for a 24-48 hour period to kill off any bugs and eggs that might otherwise be introduced.
- Inspect new residents’ units one week after arrival.

### 3.2.4 :: Procedures with Existing Residents

- Provide all residents, new and existing, with proper storage, and, in furnished rooms or apartments, furniture. See Section 3.1 for more information.
- Ensure that lease agreements permit management to inspect rooms. See Section 6 for more information and Appendix B for sample disclosure agreements.
- Given the requisite lease agreements, perform a monthly inspection of each room.
- Follow up on all complaints and monitor infestation cases proactively. In some cases, residents may become panicked and assume any bite or mark of any sort is from a bedbug. Ease the tenants’ fears, but be sure to take every complaint seriously. Because bedbug infestations are much easier to deal with when they are new and small, it is much better to have people overreport suspected bedbug infestations than it is to miss one and have to deal with the consequences later.
- Encourage residents to come forward and identify infestations by stressing that it does not reflect on them, and the management wants only to treat the bugs and will in no way inflict any sort of punishment.



- Educate residents to teach them how to identify an infestation, and impress upon them the importance of coming forward if an infestation is discovered.
- If any unit is found to be infested, initiate treatment immediately.
- Maintain records of all complaints and confirmed cases.

## INSPECTION

**4.1 :: What to Look For.** Bedbugs are small and can be very hard to spot. Though they vary in size and color through the course of their life cycles, they are visible to a carefully trained eye throughout. Here’s what to look for:

- Adult bugs: Reddish-brown flat, oval bodies, 1/8” to 1/4” long (approximately the size of an apple seed).
- Nymphs: Like adults in shape, but translucent or whitish in coloring, and as small as 1 mm (about the size of a period in a newspaper). Nymphs in later molts are larger.
- Molted skins: Light brown dry molted skins.
- Eggs: Tiny, whitish, and sticky – approx. 1/25” (about the length of two grains of salt or the size of a speck of dust).
- Excrement: Black, dark red, brown, or rust-colored spotting and staining, particularly around seams on mattresses and bedding.
- Blood spots on sheets and pillows.
- In addition to visual queues, seriously infested area may have a sickly sweet odor sometime described as smelling like “rotting raspberries” or “almonds.”



Adult bedbug.



Bedbugs & fecal spots.

**4.2:: Where to Look.** Bedbugs can hide in any number of places. They are usually found in highest numbers in, on, and around the bed. Focus your inspections, but don’t overlook anything: bedbugs can be found anywhere and everywhere. As a rule, they tend to seek out dark and hidden places like cracks, crevices, and holes, and they generally prefer textured surfaces like wood, fabric, and paper over smooth surfaces like metal, glass, and plastic. Because they can be so difficult (and expensive) to find and treat in a room with lots of good hiding places, it is far better to minimize the number of potential hiding spots *before* you have a problem by using mattress covers, plastic storage bins. (See Section 3 for more information.)



Bedbugs hidden beside a recessed screw under a nightstand.

Invite tenants to be present during the inspection of their rooms . Including the tenant in the process can ease tension and concerns the tenant might have, and s/he might also be able to offer important information.

Typical hiding places include:

1. Mattress, box spring and bed frame: particularly buttons, seams, and other nooks and crannies. Mattress covers should be removed from the bottom of the box spring for inspection. Remove the box spring and check the frame, particularly slats, joints, and behind the headboard up against the wall.
2. Walls: particularly in cracks; behind baseboards, picture frames, wall hangings, electrical outlets, wallpaper, and cracked or peeling paint; and in joints between walls or between the wall and the floor or ceilings. Check door and window frames.
3. Floors and ceilings: particularly in joints where the floor or the ceiling meets the wall, under floorboards, under rugs, and under tackboards in wall-to-wall carpeting.
4. Chairs, couches, nightstands, drawers, and other furniture: Remove cushions from chairs and couches, and vacuum thoroughly with special attention to seams. Check cracks and crevices in all furniture. Remove clothes from drawers and wash; remove drawers from dressers and vacuum in, under, and around the dresser.
5. Check and vacuum lamps, alarms, smoke detectors and all other electronic equipment and items near the bed.
6. Clothes, bedding, backpacks, purses, and other belongings.

## **TREATMENT**

**5.1 :: Types of Treatments.** There are various types of treatments used for bedbugs.

Working with a professional pest controller is always the best way to determine the proper treatment(s) for your situation. With any treatments, be aware that there are potential liability issues regarding health, safety, destruction of property, etc. (For more information on legal concerns, see Section 5.2.)

5.1.1 :: Vacuuming and Cleaning. Vacuuming, soap and water, alcohol-water solutions, and steam cleaning are basic treatments that can be very effective with minor infestations. Anything more than a minor infestation will require an additional type of treatment. First vacuum all suspected harborages (see Section 4.2), and then follow up by wiping down all surfaces with soap and water, a 50% alcohol-water solution, and/or by steam cleaning, any of which should kill bedbugs and eggs in all stages of their life cycle. After vacuuming an infested area, flea powder should always be spread on the floor and then vacuumed up to kill any bugs inside the vacuum cleaner. Vacuum bags should be immediately sealed in plastic bags and thrown away.

5.1.2 :: Pesticides. There are a number of commercial pesticides on the market. Often the most effective are only available to licensed pest controllers. Space treatments are ineffective and, because pesticides are airborne and can be inhaled, potentially dangerous to residents, staff, and others. There are many pesticides certified for use against bedbugs, including pyrethrum and other natural options.

- o Boric acid – Boric acid is a pesticide familiar to most building managers due to its use for roaches, fleas, and other insects. It is a chemical that acts by sticking to insects' bodies, desiccating them (drying them out) and causing chemical burns. It is not a repellent, and does not break down over time. As a pesticide, boric acid comes in several forms. Be sure to read the product labeling closely to make sure

that you have the proper product for its intended use (be it carpets, wall cavities, etc.). Boric acid is only mildly toxic: its toxicity is comparable to that of table salt, and the chemical is used (in heavily diluted quantities) in such products as mouthwashes and eye drops. Nevertheless, care should always be taken in application of the chemical, using it only in cracks, crevices, and cavities and avoiding it in any areas in which it might come in contact with a human.

- Diatomaceous earth – Diatomaceous earth is a mechanical, not a chemical, pesticide. It is a powder made up of tiny glass-like shards created by grinding the microscopic fossilized shells of diatoms, a form of algae. The shards act on insects by penetrating their exoskeletons, dehydrating them. It is a repellent, and does not break down over time. It is a nontoxic substance, but can be very dangerous if inhaled, as the shards can lodge deep in a person's lungs. Extreme care should be taken to protect workers when applying diatomaceous earth, and none should *ever* be applied on carpets, furniture, window sills, or in any other areas where a person might come in contact, stir up the dust, and breathe it in.
- Pulverized limestone – NIC-325 is a new product consisting of pulverized limestone. Like diatomaceous earth, it is a powder and a desiccant. Unlike diatomaceous earth, it does not contain the sharp silica particles that are dangerous to inhale. It takes approximately two weeks to be effective.
- Pyrethrum-based pesticides – Pyrethrum is a flower whose seeds contain chemicals poisonous to insects, called pyrethrins. Pyrethrins are extracted from the seeds and sold in liquid or powdered form such as flea powder. They act on insects by attacking their nervous systems and, when not present in lethal doses, act as a repellent. They can be applied in the form of a gel or a spray. In either case, they kill insects within a matter of minutes. Eggs, however, are not affected, so a follow-up treatment must be scheduled for 7-14 days after the initial treatment in order to treat any nymphs that have hatched. Pyrethrins, themselves, are not thought to be especially toxic to humans and other mammals, though to increase their effectiveness they are often combined with such synthetic chemicals as piperonyl butoxide that are suspected mutagens and carcinogens. Do *not* apply pyrethrum or any other pesticides to surfaces with which that anyone might come in contact. Also, do not treat baseboards with pyrethrum, as doing so will merely cause the bugs to relocate.

5.1.3 :: Hormones. Gentrol disks are a pesticide-free option that use hormones to affect juvenile bugs, rendering them incapable of reproducing.

5.1.4 :: Freezing. Furniture and belongings may be frozen for a period of 24 hours to kill bugs and eggs. Beware of bundled or stacked bedding and clothing, as the interior may be sufficiently insulated to prevent effective freezing of all bedbugs and their eggs.

5.1.5 :: Heating. Bedbugs die at about 111-113° F. Possible methods of heating include: dryers (for clothes and bedding), steam cleaning (for mattresses, baseboards, etc.) and placing items in sealed black plastic bags in direct sunlight for a day. As with freezing, beware of insulating bugs in bundled bedding or clothing.

5.1.6 :: Suffocating. Electronic equipment and other temperature-sensitive items may be put into a carbon dioxide-rich, oxygen-starved environment.



## 5.2 :: Initial Procedures.

- Provide tenant with a notice of infestation (see Appendix C for sample notices), along with an FAQ, general information on bedbugs, and other educational materials.
- Provide all neighboring tenants (in units next to, above, or below) notification of the infestation and a pending inspection of their units (see Appendix D for sample). Follow up with an inspection of all neighboring units.
- To prevent the spread of an infestation, janitors should spread flea powder or another pesticide on the floor before vacuuming an infested area, and afterwards seal the vacuum bag (or contents of a bagless vacuum) in a plastic bag and dispose of immediately. Staff should not remove backpacks, purses, or any other items from the room.
- Work with the tenant(s) to evaluate the extent of the problem, to identify sleeping patterns, and otherwise assess the situation. (For example, when many people first discover an infestation, they alter their sleeping patterns and move to their couch to avoid being bitten by the bugs in their bed. In such cases, the couch, not the bed, usually becomes the center of the infestation.)
- Anticipate problems tenants might have meeting any deadlines, and assist tenants in meeting those deadlines and/or rescheduling the treatment in extreme cases.
- Accommodate residents' needs for laundry service, storage for clothes and linens, and other necessary services and referrals. Assign a temporary unit if necessary.
- Provide a 24-hour reminder to resident and to staff.

## 5.3 :: Preparation for Treatment.

- All personal items are to be removed from closets, drawers, etc. Clothes should be unfolded and laid out.
- Washable and non-washable items should be bagged and sealed separately. Care must be taken to assure that there are no tears in the bags and that the bags are well sealed.
- Washable items must be washed by the tenant in hot water and dried on high setting.
- Non-washable items may be discarded, left in the hot sun in black plastic bags for 2 hours, or frozen for a minimum of 24 hours.
- Heavily infested mattresses should be bagged, sealed and discarded; other mattresses should be encased in vinyl covers and reused by tenant after initial treatment of room. Ideally, the mattress should be replaced with a new one after the final treatment.
- If the unit is carpeted, all furniture must be moved from near the walls so carpet can be pulled back for treatment of the tack strip. Heavily infested the carpet should be bagged in plastic, sealed, and safely disposed of.
- All baseboard edges should be sprayed with a mixture of 50% alcohol/water solution and then well caulked.

## 5.4 :: Treatment of Minor Infestations.

- Wash and dry all clothes and bedding.
- Thoroughly vacuum and steam clean the unit, paying particular attention to the typical hiding places listed in Section 4.2.
- Any areas where signs of the bugs are seen should be sprayed with a 50% alcohol/water solution. Fecal spots should be cleaned with a disinfecting cleaner.
- Flea powder should be vacuumed into vacuum cleaners after use to kill any live bugs inside the vacuum.
- All staff must *always* inspect their clothing for bugs before exiting an infested unit.

- Follow-up:
  - Notify tenants when it is safe to return to their units after treatment, typically 2-4 hours after treatment.
  - Schedule a follow-up treatment in 7-14 days.
  - After the final treatment, bag and dispose of mattresses. Clean vinyl mattress covers thoroughly with a 50% alcohol solution, especially around the seams.
  - Accommodate residents' needs for laundry service, storage for clothes and linens, and other necessary services and referrals.

### **5.5 :: Treatment of Serious Infestations.**

- Seriously infested units must be treated by professional licensed pest control contractors.
- When working in severely infested units, Tyvex suits and latex gloves should be worn. These garments should be removed, bagged and discarded *before* exiting the unit.
  - NOTE: All staff must *always* inspect their clothing for bugs before exiting an infested unit, whether or not wearing Tyvex suits.

### **5.6 :: Post-Treatment Follow-Up.**

- Address any resident and staff concerns.
- Order and schedule flooring and furniture replacement, if necessary.
- After each treatment, continue with a follow-up inspection and treatment in 7-14 days until the unit has been found to be 'bedbug free.'

**5.7 :: Costs of Treatments.** The costs of treatments are highly variable depending on the specifics of a given infestation, but are *very expensive* under any circumstances. Costs for the treatment of single 200- to 300-square foot unit start at around \$250 for a simple consultation or chemical spray, and can easily run up to well over \$1,000 for treatment of a minor infestation and close to \$10,000 in serious cases. (Note that these are very rough figures and can vary considerably.) The lesson to draw here is that it is much better to invest some money in preventative measures, inspections, and early treatments than it is to hold out and hope that your building gets lucky.

## **LEGAL AND HEALTH CONSIDERATIONS**

**6.1 :: The Language of the Law.** State and local laws allow building managers to inspect units and to enlist the help of the Department of Public Health with uncooperative residents:

- The California Civil Code describes the rights and obligations of a landlord in entering a dwelling unit. Except in cases of emergency, the landlord must provide 24 hours notice prior to entering a unit to inspect for bedbugs or for any other purposes. For more information, see Appendix E.
- The California Health and Safety Code grants both Public Health Departments and building owners and managers the power to "enter and inspect a building or premises whenever necessary to secure compliance with ... or perform any work required to be done" in keeping with the State Building Standards Code (California Health and Safety Code, Section 17971).

- The San Francisco Health Code says, “No person shall have upon any premises or real property owned, occupied or controlled by him, or her, or it any public nuisance,” and defines a public nuisance as, amongst other things:

“Any noxious insect harborage or infestation including, but not limited to cockroaches, fleas, scabies, lice, spiders or other arachnids, houseflies, wasps and mosquitoes, except for harborages for honey-producing bees of the genus *Apis* regulated by the California Food and Agriculture Code Sections 29000 et seq. which are not otherwise determined to be a nuisance under State law (Section 581).”

In other words, living in a unit with a bedbug infestation is considered a “public nuisance,” and therefore opens the tenant to inspection. Anyone can ask for an inspection by the Department of Public Health, and the resident is required to open his/her unit to inspection, and, should an infestation be found, is ordered to cooperate with treatment procedures and/or vacate the unit. The building manager may be held liable for paying for relocation of the tenant. Building management can also be fined for not dealing with an infestation.

**6.2 :: Legal Preparations and Precautions.** It is *always* best to prepare for potential situations with tenants who refuse inspection/treatment by including a section on bedbugs in your lease agreement. If possible, hire a lawyer to help draft the agreement. There are several things that should be included in a lease addendum, though you may decide to include some things in a separate agreement to be signed by the tenant later in the event that an infestation is discovered. Sample liability releases, notices of inspection, and other documents can be seen in the Appendices. Things you may want to include in your agreement include:

- Why it is necessary for the property management to perform inspections. (See Section 3.2.2 for more information on educating residents about the importance of inspections and treatments.)
- How, and with what frequency, the inspections will be carried out.
- That although inspections are an incursion on privacy, they are necessary for everyone’s health and safety, and that inspectors will respect the tenant’s belongings.
- What sort of cooperation is required of the tenant. (Storage of belongings? Allowing the use of sticky traps? etc.)
- Preventive treatments that have been or may be used in the unit.
- Procedures and possible treatment methods that would be used in the case of an infestation.
- That certain treatments may damage personal belongings (though beware of scaring residents away from coming forward in the event of an infestation).

**6.3 :: Working with Residents.** With a signed lease addendum or other agreement in place providing for appropriate inspection and treatment procedures, tenants are legally obligated to cooperate with building staff. You should of course decide how you prefer to work with your building’s residents, but in general it is best to begin with some sort of warning letter to the tenant. Consider seeking assistance from In-Home Support Services, Adult Protective Services, or other support services to work with the tenant. You may also call the local Department of Public Health to schedule an inspection. If the inspector finds an infestation, in most jurisdictions the resident will be legally required to cooperate with treatment. The inspector may also have the ability to declare a “structural eviction,” which is an order to temporarily vacate a unit



until it is code compliant. Failing all else, you may move to evict a non-complying tenant.

**6.4 :: Health Considerations.** Pesticides can be dangerous to tenants and staff alike.

Pesticides should never be applied to pillows, bedding, mattresses, or anywhere near someone with breathing problems, chemical sensitivity, or other health risks. Treat infestations aggressively, but be sure to heed residents' concerns about the safety of pesticides and other treatments. Always defer to the expertise of a professional pest controller. See Section 5.1 for more information on the safety of specific treatments.

## **RESOURCES AND FURTHER INFORMATION**

- Pollock, Richard & Gary Alpert. "Bedbugs (*Cimex lectularius* [Cimicidae]): Biology and Management." *Harvard School of Public Health*.  
[http://www.hsph.harvard.edu/bedbugs/?bcsi\\_scan\\_69B1CF94562E7761=0](http://www.hsph.harvard.edu/bedbugs/?bcsi_scan_69B1CF94562E7761=0) (March 13, 2006)
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<http://www.uky.edu/Ag/Entomology/entfacts/struct/ef636.htm> (March 13, 2006)

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- John Zanghi, Zanghi Torres Arshawsky LLP

## **ABOUT BAY AREA LISC**

Local Initiatives Support Corporation (LISC) is the premier community development intermediary in the United States. Founded in 1979, LISC now works in over 30 cities and 65 rural area throughout the nation. Bay Area LISC, one of the first LISC offices to open its doors, has been working since 1981 to help nonprofit community development organizations in the San Francisco Bay Area transform distressed neighborhoods into healthy and sustainable communities of choice and opportunity: good places to live, work, do business, and raise children. Our core programs support organizations that work to affect positive change in low-income communities by building and managing affordable housing, revitalizing commercial districts, and developing commercial space and community facilities. Bay Area LISC works by marshaling public and private resources to develop innovative local policies and programs to support nonprofit community organizations with training, expertise, management support, high-leverage grants, and project financing. We help neighbors build communities.



## APPENDIX A

### Sample Protocol

*Conard House, Inc.*

#### PREVENTION

	Property Manager (PM)	Program Staff (PS)	Resident	Vendor
<b>Education</b>	Provide Speaker for Mtg. Provide Written Information Address Questions & Concerns	Schedule Community Meeting Facilitate Mtg. Provide Translators (If needed) Outreach to Residents not in attendance	Attend Meeting Ask Questions Express Concerns	Deliver Oral Presentation Address Questions & Concerns
<b>Move-Ins</b>	Provide Written Information  Schedule Move-In Continue to Treatment*	Distribute Information @ Intake Address Questions & Concerns Schedule Move-In Continue to Treatment*	Receives Information Self Identifies  Receive Treatment*	   Provide Treatment*
<b>Existing Residents</b>	Post Inspection Notices Contract with Vendor Arrange Treatment	Facilitate Individual's Assessments Request Additional Inspections Refer to PM for Treatment Encourage Resident Cooperation	Present for Assessment Consent to Additional Inspection Receive Treatment	Inspection by request Report Inspection Findings Provide Treatment

#### TREATMENT

	Property Manager (PM)	Program Staff (PS)	Resident	Vendor
<b>Pre-Treatment</b> After bedbugs discovered	Contact Vendor Attends Conference Explain Moving Procedure Identify Temporary Unit Enforce Compliance Schedule Treatment Inform PS of Treatment sched. Provide Pre-Treat. Checklist Prepare Temporary Unit	Schedule Conference:PS, PM, Resident Facilitate Conference Encourage Resident Cooperation Outreach to Resistant Residents  Review Resident preparation for Treatment Complete Pre-Treatment Checklist Submit Pre-Treat. Checklist to PM	Attends Conference  Signs "Treatment Agreement"  Prepare for Treatment Follow Pre-Treat. Checklist	Attend Conference Explain Treatment Procedure Provide "Treatment Agreement"
<b>Treatment</b> Includes prophylactics for neighboring Units (Gentrol Disks)	Post 24 hr. Notice & CC PS Staff Communicate with Vendor Communicate with PS Communicate with Resident Assign Temporary Unit (If Needed) Transfer Locks Address PS/Resident Concerns	Communicate with Resident Communicate with PM Encourage Resident to shower  PS Reports Concerns to PM PS Addresses Resident Concerns	Identify Essential Belongings  Shower Dress Move into Temporary Unit  Resident Reports Concerns to PS	Launder Essential Clothing Process Other Essential Belongings Ensure Resident Showers Provide Clean Clothing Post Shower Bag & Tag Remaining Belongings Freeze Salvageable Belongings 24 Hrs. Freeze Salvageable Furnishings 24 Hrs. Dispose Unsalvageable Belongings Dispose Unsalvageable Furnishings
	Schedule 1st Pest Control Schedule Flooring Replacement Order Replacement Furnishings Address PS/Resident Concerns	Allow Vendor access to units with notice. Open door for Vendor if Resident is not present  PS Reports Concerns to PM PS Addresses Resident Concerns	   Resident Reports Concerns to PS	Initial Bed Bug Pesticide Treatment Replace Floor Covering Replace Furniture Return Salvaged Furnishings
	Schedule 2nd Pest Control Report Progress to PS Address PS/Resident Concerns	PS Reports Progress to Resident PS Reports Concerns to PM PS Addresses Resident Concerns	  Resident Reports Concerns to PS Resident Returns to Original Unit	Follow-up Pesticide Treatment (after 2 weeks incubation period) Return Salvaged Belongings to Original Unit
	Schedule 3rd Pest Control Post Pest Control Notice			Final Follow-up Pesticide Treatment
	Schedule Monthly Inspections Post Pest Control Notice Monitor Inspection Reports	Encourage Resident cooperation	Allow Access for Inspections	Conduct Monthly Inspection



## **APPENDIX B**

### **Sample Disclosures/Releases**

#### *Tenderloin Housing Clinic*

##### **PEST CONTROL AND HABITABILITY NOTICE**

California Civil Code states that landlords are responsible for providing buildings and grounds that are sanitary and free of rodents, roaches, and other pests. Tenderloin Housing Clinic is committed to meeting all requirements under the law.

Monthly pest control is mandatory for all units. Roaches and mice will not be eliminated from the building if we exterminate in only some of the units. To be effective, we must exterminate in **all** units and other areas of the hotel every month.

During the monthly pest control treatment, a member of our staff will accompany the pest control technician. Our staff will also make a cursory visual sweep of each unit for habitability.

Our contracted pest control company offers a wide range of pest control methods. Our preferred method of treatment is the gel. A copy of the Material Safety Data Sheet regarding all chemicals used in the gel can be found at the front desk. You may request a copy from the manager or any desk clerk.

All tenants are required to abide by this agreement and cooperate in monthly unit pest control.

TENANT SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

RESIDENT MANAGER: \_\_\_\_\_ DATE: \_\_\_\_\_



*Oakland Community Housing, Inc.*

**NOTICE AND DISCLOSURE TO TENANTS**

At this time [we are] engaged in an extensive program to eliminate pests and vermin... The room(s) being rented to you is clean, completely free of pests and vermin, with plumbing, heating and electrical systems in good working order, and all windows and doors intact and operable. Tenant has made an inspection of the room(s) being rented to Tenant and of the common areas and accepts the existing condition of the room(s) and common areas as in good order and repair.

Information about bedbugs:

Bedbugs travel from place to place in clothing and backpacks. Persons you allow to enter your room, especially from other infested rooms, from shelters or from other housing which has bedbugs, may bring these bugs with them. Bedbugs are active mostly at night, are hard to see, and usually you become aware of them only by receiving a bite. Once in your room, they burrow into joints and corners of the bed, bedding, furniture (especially wood), and baseboards. They are killed by heat, so regular washing your bedding and clothes in very hot water is important. You must notify the Hotel management, preferably in writing, if you see bedbugs anywhere or get any bites. You must cooperate with the management in treatment programs which may be just for your room, or for an entire floor or group of rooms. We are informed that bedbug bites do not transmit disease to humans, and the bites usually heal rapidly if kept clean and not scratched.



## **APPENDIX C**

### **Sample Bug Infestation Notices**

*Tenderloin Housing Clinic*

**Bedbug Infestation Notice**

Date \_\_\_/\_\_\_/\_\_\_

Hotel \_\_\_\_\_

Dear \_\_\_\_\_,

We have found bedbugs in your unit # \_\_\_\_\_.

Our pest control company is scheduled to treat your room on \_\_\_\_\_ at \_\_\_\_\_ am/pm (day of the week & date) (time)

Your Case Manager \_\_\_\_\_ has also been notified and will be in contact with you soon to see if you need help with preparation. In order to avoid spreading bedbugs through the hotel and to prevent bedbugs from coming back to your room, please do the following:

1. Prepare your room for the pest control company by bagging your washables and non-washables in separate plastic bags, which you can get from the property manager.
2. The janitorial staff will pick up your sealed non-washables (radio, picture frames, etc.) and take them for treatment. They will be returned to you within 24-48 hours.
3. Wash all your bedding and clothes in HOT water and dry on the hottest setting possible. Repeat the washing before each treatment.
4. Don't remove backpacks or even purses from your unit until they are thoroughly checked or treated for bedbugs. That we can be sure of treating them completely so that they don't come back.
5. Until you get rid of bedbugs, you are encouraged to spend as little time as possible in the common areas or other units in to minimize their spread.
6. Be sure to allow the pest control company to come in and work on your room when they need to do.
7. The property manager will notify you when it is safe to return to your unit after treatment. It will be approximately 2-4 hours.

**FEEL FREE TO ASK YOUR CASE MANAGER FOR HELP AT ANY POINT IN THIS PROCESS.**







