Massachusetts Integrated Pest Management (IPM) Toolkit

SELF-ASSESSMENT CHECKLIST AND RESOURCES FOR PROCUREMENT STAFF, MANAGERS, AND OWNERS OF AFFORDABLE HOUSING



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MA IPM Toolkit: Self-Assessment Checklist and Resources

Integrated Pest Management (IPM) is a prevention-based strategy that can provide long-lasting pest control, improve building conditions, and create healthier conditions for residents, maintenance staff, and pets. Instead of relying on regularly scheduled applications of pesticides, IPM targets the underlying causes of pest infestations, to deprive pests of food, water, shelter, and building access. IPM employs

pest–proofing strategies, pest-aware maintenance practices, trash management, and the use of the least-toxic chemicals to reduce or eliminate known pest problems.

Why Pursue IPM

Many property owners use IPM approaches with great success. Implementing an IPM program can provide long-term, effective pest control; prevent pest related damage to buildings; and provide substantial health benefits and more sustained improvements in indoor environmental quality for your residents.

Benefits of an IPM program include:

- A reduction or removal of pest and/or rodent allergens, leading to a reduction in asthma causes and triggers.
- Better pest control, leading to fewer pest work orders and pest-related complaints.
- Reduced exposure to hazardous chemicals.
- Improved health and living conditions for residents and property management staff.
- Reduced pest-control costs over time.

For additional information on the health-related costs and benefits of IPM see the *Role of Pest Control in Effective Asthma Management: A Business Case* http://asthmaregionalcouncil.org/wp-content/uploads/2014/02/2009 RolePestControl IPM.pdf.

Using the Toolkit

This toolkit is designed to help implement new IPM programs and assess and improve existing programs.

Contents:

IPM Self-assessment	4
Attachment A: Model Scope of Services	6
Attachment B: Model RFP	12
Attachment C: Sample Focus Unit Tracking Log	20
Attachment D: IPM Team Roles	21

Attachment E: Pest-proofing Tips	0.0
for Building Owners and Managers	23
Attachment F: Pest Management Opportunities during Building Renovations	27
Attachment G: Sample IPM Policies	29
Attachment H: Resources	35

Principles of IPM

- ✓ Identify pest problems through monitoring and inspection.
- ✓ Block pest entry points.
- ✓ Remove pests' food, water, and shelter.
- ✓ Use low-toxicity, low-risk pesticides only as needed
- ✓ Comply with relevant state regulatory requirements.

IPM Self-assessment

The following self-assessment is an easy reference tool for owners and property managers to determine if current pest-management practices are consistent with IPM pest-prevention treatments and services; utilize the full IPM Team, including maintenance and resident services; and integrate IPM into owner policies and broader renovation practices.

	Pest Prevention Treatments and Services			
Does Your Program Have	In Order to Meet the IPM Criteria of	In Policy or Contract?	Additional Information	
Regular Inspections & Monitoring	Regularly documenting current pest problems, potential future issues, maintenance needs, and appropriate treatment. Regularly scheduled inspections that identify evidence of pests, pest entry points, and cleaning, maintenance, or trash management issues.		Model Scope of Services	
IPM Plan & Recordkeeping System	Identifying focus pests and pest-conducive areas, and ongoing monitoring needs. Recommending responses based on pest populations/locations. Using a recordkeeping system that enables owners and managers to track target areas.		Model RFP; Model Scope of Services; and Sample Focus Unit Tracking Log	
Pest-specific Control Protocols	Establishing clear procedures by emphasizing non- pesticide methods that deprive pests of food, water, and shelter to minimize residents' exposure to pesticides.		Model Scope of	
Limited/Targeted Pesticide Use	Clearly prohibiting routine pesticide use and identifying appropriate uses of pesticides.		<u>Services</u>	

	Integrating IPM with Broader Policies and Activities				
Does Your Program Have	In Order to Meet the IPM Criteria of	In Policy or Contract?	Additional Information		
Integration with Maintenance Activities	Establishing a clear process to request maintenance repairs to seal holes and cracks, manage trash, minimize moisture, or other pest prevention activities.		Model Scope of Services and Pest Proofing Tips for Building Owners, Managers and Staff		
Integration with Renovation & Construction Projects	Looking for opportunities to prevent future issues by fixing leaks and moisture problems, sealing cracks and holes, and using pest-resistant materials during capital improvement projects.		Pest Management Opportunities during Building Renovations		
A Written IPM Policy or Procedures	Establishing clear expectations for pest control consistent with IPM practices and ensuring practices are supported by leadership.		Sample IPM Policies		

	IPM Team		
Does Your Program Have	In Order to Meet the IPM Criteria of	In Policy or Contract?	Additional Information
An IPM Trained/Certified Pest Professional	Using a licensed pesticide applicator with the appropriate IPM training or certification.		Model RFP
Defined Roles for Your IPM Team	Coordinating pest prevention and treatment activities among the owner, property manager, maintenance staff, pest professional, resident services support, and residents.		IPM Team Roles
Resident Education & Engagement	Providing residents with information to minimize pest problems in their homes.		Stop Pests at: http://www.stop pests.org/workin g-with-residents/

Attachment A: Model Integrated Pest Management Scope of Services

1 Inspections

2 IPM Plan

3 IPM Services

4 Pesticide Use

5 Pest Specific **Control Services**

6 Recordkeeping and Coordination with Property/Building Management

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

Attachment A: Model Integrated Pest Management Scope of Services

An Integrated Pest Management (IPM) contract should be written to require results, rather than as a regular schedule of visits from the contractor. This model scope of services provides a sample approach, which can be customized with your pest professional. It focuses on pests that can trigger asthma attacks (rodents, cockroaches), but also includes activities surrounding the treatment for bed bugs. For more specific information about bed bugs, see Frequently Asked Questions about Bed Bugs and Protocols for the Management Bed bugs in Multi-unit Housing at http://www.mass. gov/eohhs/gov/departments/dph/programs/

A Scope of Services should include:

- ✓ A detailed description of the pests covered and excluded.
- ✓ The types of services provided and pest-specific methods to be used.
- ✓ The frequency of service and the areas of service.
- ✓ The products, tools, and materials that are allowed and prohibited.
- ✓ Recordkeeping requirements.

environmental-health/exposure-topics/pests/information-about-Bed bugs.html.

This scope of services is an excerpt and revision of the New York City Integrated Pest Management Toolkit for Building Owners, Managers, and Staff.

1 Inspections

The pest professional must conduct initial and regular inspections of exterior and interior spaces to identify evidence of pests and pest entry points, and cleaning, maintenance, or trash management issues. At a minimum the contractor will:

- A. Conduct an initial inspection of all apartments, common areas, basements, utility rooms, management offices, maintenance shops and storage areas, building exteriors and trash areas, and other spaces deemed necessary by the property manager within the development.
 - 1. The initial inspection shall include visual inspection, the placement of monitoring traps, and an evaluation of the needs of the premises. In apartments, inspect areas under sinks, behind appliances and cabinets, where pipes enter walls or create holes/ gaps, pest entry or high risk areas. During the initial inspection:
 - Install/place monitoring devices that can be accessed routinely in common areas and other problem areas; and
 - Identify problem areas in and around the building.
- Document inspection activities and results in a written report. Results should describe: areas inspected (and any areas that the pest professional could not access or inspect); pest activity observed (type and location of pests, and level of infestation); problem areas; number and placement of monitoring traps; activities and conditions in the building that are contributing to existing and potential pest problems (i.e., pest-related maintenance needs and housekeeping concerns); and any other information gathered during the inspection (including any inspection reports).
- C. Annually, after the initial inspection, inspect all apartments (as feasible), common areas, basements, utility rooms, management offices, maintenance shops and storage, building exteriors, and other spaces deemed necessary by the property manager within the development.
- D. Ideally, provide a minimum of 48 hours' notice to residents, for access to the apartments.

Attachment A: Model Integrated Pest Management Scope of Services

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Attachment H: Resources

2 IPM Plan

The pest professional will develop and submit an IPM Plan (or revisions to the plan), based on building-wide inspections and documentation from routine inspection/monitoring. The IPM Plan must describe the:

- A. Problem areas and units (i.e., those with active or history of pest problems).
- B. Inspection and re-inspection schedule after treatment.
 - 1. Two-week follow-up after treatment of most active pests is appropriate. The service provider may recommend other follow-up schedules, Services which can be evaluated by the IPM team.



Source: New York State IPM Program

- 2. Note: unless live bed bugs are reported by the resident, re-inspection should not happen less than two weeks after treatment.
- 3. Trapping efforts (for rodents or wildlife) will likely warrant same-week follow-up.
- C. Strategies that specify areas to be monitored, monitoring traps or equipment deployed, the schedule to check all monitoring devices, and responses to new evidence of pests. Ongoing monitoring for active infestations is recommended in locations with a history of infestations or those with housekeeping issues, or other evidence of pests.
 - 1. For bed bugs, monitor all rooms in the focus unit, not just the bedroom, and monitor units surrounding (left, right, up, and down) problem units.
 - 2. In buildings with a history of cockroach or rodent issues, monitor throughout the building.
- D. Service schedule and control method by pest. (See #5 below on "Pest Specific Control Services".)
- E. Recommended maintenance, trash management or structural repairs, and tenant housekeeping issues.
- Unit turnover treatments, in response to maintenance requests.

3 IPM Services

Treatment services provided by pest control professional will include:

- A. Sealing small (¼ inch or less) openings, cracks, crevices, entry points and other locations with pest debris (e.g., fur, nest materials, etc.) or where food and/or water can collect.
- B. Removing pests and pest evidence with High Efficiency Particulate Air (HEPA) vacuum or steam cleaners. Wet cleaning methods are recommended to remove rodent nests and nesting materials to prevent spreading allergens and pest waste during removal. Such cleaning services may be conducted in coordination with building staff and residents.
- C. Applying pesticides only as detailed in the IPM Plan that have been approved by the building manager and that meet requirements specified in #4, below, in "Pesticide Use."
- D. Placing sticky traps and other monitoring devices in appropriate locations to monitor pest activities.
- E. Communicating findings to building manager or maintenance coordinator and residents as outlined in #6 below in "Recordkeeping and Coordination with Property/Building Management."

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3 IPM Services

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5 Pest Specific Control Services

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4 Pesticide Use

The pest management professional will adhere to the following rules for pesticide use:

- A. Legal Products and Use: pesticides must be legal for use in the State of MA and applied in accordance with the label directions.
- B. Approved Products: Apply only pesticide products that have been included in the IPM Plan and approved in writing by the building manager or maintenance coordinator.
- C. Prohibited:
 - 1. Indoor foggers or "bug bombs"
 - 2. Organophosphate or chlorinated hydrocarbons pesticides
 - 3. Broadcast or baseboard spray applications
- D. Pesticide Storage: Do not store any pesticide products in the buildings, as specified in the contract.
- E. Application by Need: Apply pesticides according to need and not by schedule. Do not apply pesticides inside or in outside areas unless visual inspection, monitoring devices, or documented site history indicate the presence of pests in that specific area and in excess of actionable levels specified in the IPM Plan.
- Minimization of Risk: When pesticides are necessary, use the least-hazardous materials, with the most-precise application technique, and with the minimum quantity of pesticide necessary to achieve control. Apply pesticides in a manner that limits exposure to residents and pets.
 - 1. Additional information on pesticide safety can be found at:
 - EPA Pesticide Program https://www.epa.gov/pesticides
 - Massachusetts Department of Agricultural Resources http://www.mass.gov/ eea/agencies/agr/
- G. Notification: Provide a written notice of the intention to apply pesticides, a minimum of 48 hours in advance. Notifications should include: name and phone number of company making the application; proposed date and time of application; locations to be treated; product names, EPA Registration Numbers, and active ingredients for the pesticide products that may be used; purpose of application; preparation procedures required by the pesticide label, to protect items such as food, utensils, and pests; and the Massachusetts Department of Agricultural Resources (MDAR) approved Consumer Information Bulletin. See 333 CMR 13.08 at http://www.mass.gov/courts/case-legal-res/ law-lib/laws-by-source/cmr/300-399cmr/333cmr.html for additional information.
- H. Emergency Procedures: In case of emergency situations, request written approval from the property owner/manager if it is necessary to vary from the above procedures.

5 Pest-specific Control Services

A. General:

- 1. Emphasis on non-pesticide methods as first and primary strategies.
- 2. Treatment services include sealing openings, cracks, and entry points with expanding foam, copper mesh, metal hardware cloth, caulking, spackle joint compound, etc., and removing pest debris and food debris with HEPA vacuuming or steam cleaning.



Source: National Center for Healthy Housing

Attachment A: Model Integrated Pest Management Scope of Services

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4 Pesticide Use

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Attachment G: Sample IPM Policies

Attachment H: Resources

- (See Attachment E: Pest Proofing Tips for **Building Owners and Managers**).
- 3. Coordinate with maintenance staff to seal larger holes, cracks, and address maintenance issues (e.g., leaks, moisture problems, or trash management).
- 4. Communicate findings to property/building manager or IPM coordinator, as well as any resident services coordinators.



Source: New York State IPM Program

- 5. Provide housekeeping and other in-unit recommendations to the property manager, IPM coordinator, and resident services coordinator.
- B. Insect Control (with focus on cockroaches):
 - 1. During each service visit, give special attention to kitchen, bathroom, and laundry areas, including spaces beneath sinks, counters, appliances, etc.
 - 2. Use sticky traps to monitor for cockroaches or other insect activity.
 - 3. For cockroaches, the pest management professional may use insecticidal baits or dust formulations and insect growth regulators, consistent with #4 above, "Pesticide Use." Bait and other product formulations will be rotated as needed, to improve efficacy.
 - Remove old, dried gel baits before applying fresh bait.
 - Use HEPA vacuum to remove cockroach droppings, old evidence of cockroaches, and related debris.

C. Rodent Control:

- 1. Seal holes and cracks that can be entry means for rodents using durable materials (e.g., metal hardware cloth, corrosion-proof stuffing in wall penetrations and door sweeps). See also Attachment E: Pest Proofing Tips for Building Owners and Managers.
- 2. Because traps are a critical method of indoor rodent control, and can be used to reduce rodent populations and monitor pest activity, the pest professional shall set traps throughout the service areas. (Note: If using peanut butter in snap traps, consult residents about nut allergies. Place all snap traps in secure locations, away from children and pet access.)
 - The pest professional will check trapping devices on a schedule approved by the building manager.
 - All trapped rodents and all rodent carcasses will be disposed of by the pest professional in an appropriate manner.
- 3. Obtain approval from the building manager or maintenance coordinator before rodenticide use. Use only when deemed essential, and to supplement structural or mechanical controls, and consistent with #4 above, "Pesticide Use."
 - All rodenticides, regardless of packaging, shall be placed in locations not accessible to children, pets, wildlife, and domestic animals or in EPA- approved tamper-resistant bait boxes labeled with the pest contractor's name and address.

For more information, see the National Pest Management Association's **Best Management Practices** for Bed Bugs at http://www. pestworld.org/media/562243/ npma-bed-bug-bmpsapproved-20160728-1.pdf

Attachment A: Model Integrated Pest Management Scope of Services

1 Inspections

2 IPM Plan

3 IPM Services

4 Pesticide Use

5 Pest Specific Control Services

6 Recordkeeping and Coordination with Property/Building Management

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Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

- The lids of all bait stations must be securely locked or fastened shut.
- All bait stations must be securely attached or anchored, to floor, ground, wall or other immovable surface, so that the box cannot be picked up or moved.
- Bait stations should be inspected during every service visit, to ensure stations are not harboring non-target pests, and to check for tampering.

D. Bed Bug Control:

- 1. Inspect for bed bugs visually. Target mattresses, sheets, pillowcases, other bed linens, box springs, bed frames, and headboards. While the focus of the inspection should be the bed, other furniture (sofa, recliner) or bed bug harborage areas throughout the unit, must also be inspected.

Source: New York State IPM Program

- 2. In conjunction with maintenance staff and as appropriate given the specific circumstances, consider use of moat style traps to monitor activity around beds (used on bed legs) or other furniture throughout the unit. Note that failure to trap a bed bug is not proof that there isn't an infestation.
- 3. If necessary to confirm bed bugs, use a certified canine team to detect bed bugs and viable eggs. Certified teams include those from the National Entomology Scent Detection Canine Association (NESDECA). Use of canine teams should be used only after consulting residents about allergies to dogs.
- 4. Work with maintenance staff, management, and residents to address clutter and housekeeping issues.
- 5. Use mattress, box spring, and furniture encasements, if appropriate. Disposal of items because they are infested with bed bugs should generally be discouraged. If necessary, due to level of infestation or condition of the item, wrap and remove furniture or bedding in plastic and label as bed bug infested.
- 6. Provide residents with clear pre-treatment instructions.
- 7. Treatments to reduce heavy infestations should include instructions to vacuum with HEPA filter only in conjunction with steam, heat, and/or targeted chemical treatments.
 - Targeted chemical treatments can include the placement of diatomaceous earth (DE), using a power duster around the interior perimeter of the unit (e.g., under baseboards, in wall voids, in drop ceilings, behind faceplates, and other locations as needed).
 - DE can be a respiratory irritant; care should be taken in homes of those with respiratory issues.
 - When using heat treatments, document that the temperature reached a sufficient level (122 degrees F). Often a second treatment is needed.
- 8. Monitor units that abut and surround the focus/treated unit, using visual inspection, canines, and/or monitoring traps, as appropriate.
- 9. Unless resident reports live bed bugs, re-inspect no sooner than two weeks after treatment to allow for new eggs to hatch.

Attachment A: Model Integrated Pest Management Scope of Services

1 Inspections

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Attachment H: Resources

6 Recordkeeping and Coordination with Property/Building Management

- Recordkeeping Forms: The pest professional must submit, to the building manager or maintenance coordinator, a signed, dated tracking form for each visited site, after each visit. (See Attachment C for a Sample Focus Unit Tracking Log). All forms must be submitted in hard copy or electronically, if using an electronic tracking system. Each form must include:
 - 1. A record of monitoring device results;
 - 2. All actions taken;
 - 3. Define action threshold by pest and location, including brand names and active ingredients for pesticides used; and,
 - 4. A list of units and common areas where infestation occurred, and any areas the pest professional was unable to access.
- B. Service Updates to Building Management: The contractor will:
 - 1. Schedule quarterly (or more frequent) meetings with the building manager or maintenance coordinator to provide updates on work performed, an assessment of existing problem areas, and future treatment plans.
 - 2. Provide an annual summary of progress and planned activities for problem infestation areas, pesticides use, brand names, and active ingredients.
- C. Proof of Service: All invoices will be accompanied by proper proof of service, including the date of service, the technician's time of arrival and departure, and a detailed report of all services performed (including target pests, treatment actions completed, chemicals/products used and locations of use). This proof of service is to be verified and signed by the building manager or maintenance coordinator (in the case of regular extermination or special common-area treatments), or the resident (in the case of bed bug and/or any other apartment-specific treatments). Invoices will not be paid until the pest professional provides acceptable proof of service.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model **Request for IPM Proposals (RFP)**

1 Introduction and **Executive Summary**

2 Specifications

3 Firm Qualifications

4 Price Proposal

5 Proposal **Evaluation Criteria**

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

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Attachment H: Resources

Attachment B: Model Request for IPM Proposals (RFP)

IPM is a specialized service. It is important to hire a company that is knowledgeable about IPM practices and able to meet the goals of your IPM program. A pesticide applicator license, while required by the state, does not guarantee the expertise or quality necessary for an effective IPM program.

Your Request for Proposals (RFP) needs to be specific about the terms of your IPM program and what you expect from the bidders. The following is a model RFP. While this model focuses on the pests that can trigger asthma attacks (e.g., cockroaches and rodents), it includes other common pest concerns.

Request for Proposals (RFP) **Integrated Pest Management Services**

[Insert Name of Organization] is requesting

proposals from qualified and experienced firms to provide Integrated Pest Management (IPM) services to its portfolio of multi-family housing properties. The initial term of the contract is for a one-year period and at the [Insert Name of Organization] sole option, may be renewed for two additional one-year terms under the same terms and conditions. The cost proposal option selected by the [Insert Name of Organization] must be held firm for the duration of the contract, including each one (1) year extension.

Firms interested in responding to this Request for Proposal (RFP) must submit the following information.

1 Introduction and Executive Summary

Submit a letter of introduction and executive summary of the proposal. The letter must be signed by a person authorized to obligate your firm to perform the commitments contained in the proposal. Submission of the letter will constitute a representation that your firm is willing and able to perform the commitments contained in the proposal in compliance with MDAR Pesticide Bureau regulations and consistent with the IPM guidance from the Environmental Protection Agency, the Department of Housing and Urban Development, and the StopPests IPM Guide to Affordable Housing, and [Insert Name of Organization] IPM policy dated [Insert date of last approved IPM policy] and applicable revisions.

The Offeror must provide services in a manner that demonstrates compliance with these guidelines, as well as sensitivity toward the company's IPM objectives including the ability to:

- A. Minimize risk by using the least-hazardous materials, with the most-precise application techniques, thus putting the needs and safety of residents and property staff as the foremost priority.
- B. Monitor for pests throughout the property.
- C. Help educate resident and staff about their role in pest control.
- D. Apply pesticides based on need, not on a pre-determined schedule.

- ✓ Spend the time to find the right company that is qualified and able to meet your IPM goals.
- ✓ Performing appropriate monitoring and preventative activities may take extra time and require additional skill. The lowest bidder may not always be the best choice when it comes to meeting your IPM goals.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model **Request for IPM Proposals (RFP)**

> 1 Introduction and **Executive Summary**

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- E. Apply only pesticide products or formulations included in the IPM Plan and approved by the building manager.
- F. Manage pests without the use of foggers or bombs, organophosphate or chlorinated hydrocarbons, or broadcast or baseboard spray applications (unless it is an insect growth regulator or needed to address bed bug infestations).

2 Specifications

A. Covered Pests

The Offeror shall demonstrate its approach to and submit proposal(s) for suppressing the following pests:

1. Indoor propulations of rodents (including mice, rats, gophers); insects (including cockroaches, wooddestroying insects such as termites, ants, fleas, spiders, filth flies, mosquitoes); bed bugs; pantry pests, such as Indian meal moths; and birds, bats, snakes, raccoons, skunks, and all other vertebrates.



Source: New York State IPM Program

- 2. Outdoor populations of potentially indoor-infesting species that are within the property boundaries of the specified buildings.
- 3. Nests of stinging insects within the property boundaries of the specified buildings.
 - All such species found within the structure of the building are covered within the scope of this contract. Populations of these pests that are located immediately outside of the specified buildings, and pose a possible infestation problem to the specified buildings or surrounding property, are also included.
 - Contractors may subcontract portions of the contract. However, all such work will be covered under the specifications of this contract, and the prime contractor will be responsible for all work conducted under the scope of this contract. The bidder is required to include in its response a list of any proposed subcontractors, and a list of tasks or items, if any, which the bidder intends to subcontract.

B. Service Capabilities

Contractor must to able to service all types and sizes of facilities and buildings: All buildings are located in [Insert contract territory]. Buildings covered by this contract include:

[Insert list of buildings including address and number of units in each].

This list of buildings is to be used as a reference in size and number of apartments. In addition, some buildings may contain office areas, common areas, laundry rooms, basements, utility rooms, maintenance shops and storage areas, and common kitchen areas. All enclosed spaces of each building are included in this contract as well as the exterior property of each location owned by the [Insert Name of Organization], unless the property manager or owner specifically excludes specific spaces.

C. IPM Approach

1. Initial Inspection

Offeror shall describe how it will conduct initial inspections at each property of all apartments, common areas, basements, utility rooms, management offices, maintenance shops and storage, building exteriors, and other spaces as deemed necessary by the property manager.

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The initial inspection shall include visual inspection, the placement of monitoring traps, and an evaluation of the needs of the premises. The following specific points must be addressed during the initial inspection:

- Identification of problem areas in and around the building;
- Review previous efforts;
- Establish locations for routine monitoring in common areas;
- Access for IPM professional to key areas; and
- Information for the Selected Offeror of any restrictions or special safety precautions.

Offeror shall describe how it will document inspection activities and results in a written report, or include the information in the IPM Plan described below. Results shall describe: areas inspected; pest activity observed (type and location of pests, and level of infestation); problem areas; number and placement of monitoring traps; activities and conditions in the building that are contributing to existing and potential pest problems (i.e., pest related maintenance needs and housekeeping concerns); and any other information gathered during the inspection (including any inspection reports).

2. IPM Plan

Within 30 days of conducting the Initial Inspection, the successful bidder must present an IPM Plan to the [Insert appropriate title e.g., building manager, maintenance supervisor, property manager, etc.] for approval. The Offeror will be responsible for carrying out work according to this approved IPM Plan. Each Offeror must submit a sample IPM plan with its bid that demonstrates the ability to produce IPM plans. Each IPM plan must, at a minimum, include:

- Methods for monitoring and surveillance, by pest type, including monitoring tools and products that will be used (including non-chemical tools such as HEPA vacuums to remove dead bugs and droppings), and a product-rotation plan.
- Identification of problem areas and focus units, with current or likely pest problems (i.e., locations and extents of infestations, observed damage to structure or commodities, conditions conducive to infestation, harborage areas, sanitation deficiencies, avenues of potential entry).
- A description of structural or operational needs, and improvements, including any modifications of maintenance operational methods to pest management (e.g., caulking around pipes, sealing holes after repair work, unit turnover suggestions).
- Service schedules for each property including, at a minimum, annual inspections of each property, visual inspections, checking and deploying monitors, and procedures to address ongoing unresolved pest issues.
- Control methods, by pest type.
- Commercial pesticide applicator certificates or licenses and IPM certification/ training by local contracting staff.
- Designation of vendor's key contact person and key property management contract at the property. Description of location for pest activity log book(s) at the property or access to online electronic activity logs.
- Description of the procedures to report maintenance or pest prevention needs to the appropriate property maintenance staff.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model **Request for IPM Proposals (RFP)**

1 Introduction and **Executive Summary**

2 Specifications

3 Firm Qualifications

4 Price Proposal

5 Proposal **Evaluation Criteria**

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

- Identification of tenant housekeeping issues, and opportunities to coordinate with relevant resident services coordinators.
- Thresholds for the process for and frequency of, updates to the IPM plan. Throughout the life of the contract, the IPM Plan will be reviewed, renewed, and adjusted annually, or as conditions warrant, by both the [Insert appropriate title e.g., building manager, maintenance supervisor, property manager, etc.] and the contractor.

3. Contracted Work

Offeror shall describe its standard practice BY **PEST** and timeline in implementing the following contracted services as approved by the IPM Plan:

- Routine Monitoring and Inspection
- Call-back Services
- **Emergency and Special Services (including** Bed bug responses)
- Resident and Staff Education
- **Unit Turnover Services**

4. Pesticide Applications

The chosen contractor is prohibited from making pesticide applications on a routine or periodic basis in the absence of evidence of pest activity. No pesticide application will be made unless the presence of a pest is confirmed through visual inspection or a monitoring device, the pest has been identified, and the pesticide product has been included in the IPM Plan approved by the building management. Pesticides may be applied in anticipation of pest presence if historical records from the area justify the need, and the building manger has provided prior written approval for the one-time service.

The follow pesticides are prohibited:

- Indoor foggers or "bug bombs";
- Organophosphate or chlorinated hydrocarbons pesticides; and,
- Broadcast or baseboard spray applications.

All pesticides used must be registered with the Environmental Protection Agency (EPA) and the MA Pesticide Board Subcommittee.

Listed below are examples of pesticide products that may be proposed in the IPM plan.

- For cockroaches: Use of insecticidal baits or dust formulations, and insect growth regulators as a mode of action. Use of a HEPA vacuum to remove cockroach droppings, old evidence of cockroaches, and related debris.
- For rodent control: Use of snap-traps or other lethal traps (only using peanut butter after consulting residents about nut allergies). Rodenticides placed in locations not accessible to children, pets, wildlife, and domestic animals, or in appropriately labeled, EPA-approved, tamper-resistant bait boxes.



Reinforced Door Sweep Source: R.J. Pollack, Harvard University

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model **Request for IPM Proposals (RFP)**

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3 Firm Qualifications

4 Price Proposal

5 Proposal **Evaluation Criteria**

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

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Attachment F: **Pest Management Opportunities During Building Renovations**

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Attachment H: Resources

Permission to use a pesticide not listed in the approved IPM plan must be given in writing by the [Insert appropriate title e.g., building manager, maintenance supervisor, property manager, etc.], prior to application. Blanket approvals will not be allowed. The chosen contractor must keep a record of the request and approval, along with the rationale for need, whenever a non-approved product is applied.



Source: Shutterstock

The retention time for these records shall be three (3) years.

The offeror shall describe how they intend to rotate products to improve efficacy.

- 5. Progress Updates to Property/Building Management The offerer shall describe its experience and practices in providing in-person and written updates to property management. Offerer shall participate in quarterly meetings with building and property management staff, and provide an annual review of progress and strategies.
- D. Customer Support Services

Offeror shall describe how its customer support capabilities ensure that quality assurance, after-hours support and conflict resolution issues are addressed timely and to final resolution. Offeror must have demonstrable processes for handling complaints, invoicing discrepancies, requests for additional services, order tracing, and record tracking. Each bidder shall describe how it will interact with on-site maintenance staff and property management staff to coordinate needed repairs impacting pest infestations.

- E. Training & Education
 - Offeror shall describe its capability to provide recommended education and training activities for property staff, and residents. Descriptions should include samples geared towards increasing the support of staff and residents for IPM activities.
- Reporting and Recordkeeping
 - Each bidder must describe its reporting capability indicating your ability to produce reports on an "as-needed" and recurring bases. Bidders must include a samples of reports or demonstrate an electronic reporting system.
 - Each offeror shall provide a sample of a developed monitoring and recordkeeping system designed for regular sampling and assessment of pests, including: identification of dates of visits and records of monitoring device results, actions taken and pesticides applied; surveillance techniques; remedial actions taken; and identification of problem units. Bidders shall provide the proposed delivery time (measured from submission of request to delivery), for each of the following report/notifications:
 - 1. Notification of Upcoming Service (signs and preparation instructions that must be posted at least one week in advance of routine inspection, including appropriate translated materials for residents who do not speak English);
 - 2. of Pesticide Use (a form left at the treatment location detailing the product and where it is to be used, any precautions that can be taken to reduce risk of exposure, and nonchemical control techniques that can be used to prevent further infestation).

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

1 Introduction and Executive Summary

2 Specifications

3 Firm Qualifications

4 Price Proposal

5 Proposal Evaluation Criteria

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F:
Pest Management
Opportunities During
Building Renovations

Attachment G: Sample IPM Policies

Attachment H: Resources

- Inspection/Sanitation/Maintenance Report (summary highlighting troubled areas or units);
- 4. Quality Control Summary (quantitatively and qualitatively reporting the measurable successes and failures of the program). Monitor counts will be used to determine level of treatment success. As noted above, offerer shall provide quarterly updates in meeting with building management staff, and an annual review of the IPM plan.



Source: New York State IPM Program

3 Firm Qualifications

A. Each Offeror shall provide:

- 1. The name, address, and telephone number of a primary contact person.
- 2. Address(es) and location(s) of local offices and service headquarters that would service the contract.
- 3. Evidence of license by MDAR, Pesticide Bureau and additional industry certifications (e.g., QualityPro, GreenPro, Green Shield, or other IPM certifications or trainings).
 - State law requires all persons who apply pesticides in public and private places used for human occupation and habitation, with the exception of residential properties with three or less dwelling units, be in possession of a valid license or certification issued by the MDAR. See Massachusetts General Laws Chapter 132B, Section 10. For more information on the type of license required, please visit: http://www.mass.gov/eea/agencies/agr/pesticides/license-and-certification-types-and-requirements.html.
 - QualityPro is administered by the Foundation for Professional Pest Management, and can be found here https://www.npmaqualitypro.org/. QualityPro-certified companies may also become GreenPro-certified, to show a commitment to providing customers with reduced risk, and comprehensive and effective pest control services. Additional information on GreenPro can be found at http://www.npmaqualitypro.org/greenpro/.
 - Green Shield Certified is an independent, non-profit certification program
 that promotes practitioners of effective, prevention-based pest control while
 minimizing the need to use pesticides. See http://www.greenshieldcertified.org/.
 - Additional information on IPM trainings can be found at: http://www.stoppests.
 org/ and http://healthyhousingsolutions.com/hhtc/.
- 4. A list of at least four (4) verifiable references (including names, titles, affiliations, and telephone numbers) for work comparable to these specifications, completed in the past three (3) years or in progress.
 - References should include at least two (2) examples from multifamily housing, where offerer has creatively applied the IPM approach to solve difficult pest problems, including a project summary, budget information if appropriate, and contact information for references at the facility involved.
- 5. The names of all staff, supervisors, and subcontractors who would work on the contract including:
 - The role each staff member and subcontractor would play in the project (onsite service technician, onsite supervisor, manager, owner, etc.).

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model **Request for IPM Proposals (RFP)**

1 Introduction and **Executive Summary**

2 Specifications

3 Firm Qualifications

4 Price Proposal

5 Proposal **Evaluation Criteria**

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

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Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

- Experience, education, and qualifications of each staff member, including licenses and certifications held, verification that license(s) are valid, and other relevant training or skills. IPM training, outside of in-state recertification training, should be highlighted.
- The successful bidder will be required to submit a copy of each pesticide applicators' license(s)
- The Offeror's Associate Certified Entomologist (ACE) or Board Certified Entomologist (BCE), or other employee holding a degree in entomology who has demonstrated expertise in structural pest control, especially for rodents, bed bugs, and cockroaches.1 (Note: a National Pest Management Association [NPMA] staff entomologist would qualify2).
- Written assurance that the staff members listed above will be performing the work and will not be substituted with other personnel or reassigned to another project without prior approval. Assurance must also be made that any substitute personnel be fully qualified.
- 6. A list of pest control products that may be used in the IPM process, and electronic access to the current labels and Safety Data Sheets (SDS).
- 7. A list of any violations of state pesticide regulations or pest management regulations within the past three years.

B. Each Offeror shall also describe:

- 1. In-house or external IPM training provided to employees.
- 2. In-house health and safety programs provided to employees.
- 3. The extent of the company's experience using pest exclusion, nonchemical, and reduced-risk chemical pest control methods.
- 4. The company's working knowledge of pesticide hazards, including toxicity, human exposure potential, and potential environmental effects of pesticides.
- 5. The company's knowledge of the specialized pest management concerns typically faced by multi-family housing properties.

¹ The Entomological Society of America offers two certifications: (1) ACE program for pest management professionals with strong training and experience in insect-related work, but without the academic training of required of professional entomologists; and BCE a program for professional entomologists with degrees in entomology or a closely-related field. See http://www.entocert.org/about.

² NPMA, a non-profit organization, aims to support the pest management industry's commitment to the protection of public health, food, and property through education, advocacy, and growth of the market. See https://www.npmapestworld.org/.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model **Request for IPM Proposals (RFP)**

- 1 Introduction and **Executive Summary**
- 2 Specifications
- 3 Firm Qualifications
- **4 Price Proposal**
- **5 Proposal Evaluation Criteria**

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

4 Price Proposal

The [Insert Name of Organization] intends to award this contract to the firm that, in its sole discretion, it expects to provide the best overall program services. The [Insert Name of Organization] reserves the right to accept a bid other than the lowest, and to reject any or all bids or part therefor, including those not responsive to this request.

Please provide a price proposal that includes a pricing model, with a menu of pricing that minimally include estimates for the following services:

- A. Initial Inspection of all apartments, common areas, management offices, storage and service areas, and exterior areas
- B. IPM Plan
- C. Routine Inspections
- D. Call-Back Service
- E. Emergency Services
- F. Unit Turnover Service
- G. Special Services (bed bug, wildlife, bird, etc.)
- H. Training and Education
- Progress Updates to Building Management



Source: National Center for Healthy Housing

5 Proposal Evaluation Criteria

The following criteria will be used to evaluate the Offeror's proposal, however, the [Insert Name of Organization] reserves the right to select a primary supplier that it deems appropriate, at its sole discretion, without regard to these criteria.

- A. Qualifications and Experience, including specific IPM certifications, training, and experience
- B. Product Delivery and Service Approach
- C. Reporting and Record Keeping
- D. Customer Support/Response Times
- E. Price Proposal

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: Pest Management Opportunities During Building Renovations

Attachment G: Sample IPM Policies

Attachment H: Resources

(Provided by Stoppests.org; Pest management companies are increasingly using electronic tracking tools to capture and record this type of information.) Attachment C: Sample Focus Unit Tracking Log

The IPM team identifies areas or units of focus and coordinates IPM efforts. This sheet unites pest control, housing, and maintenance record-keeping systems. Keep it in the front of the IPM log. Name/Address of Property:

O ate	- - - -	ome N	Pest Level	Repairs Needed	pepee	Recent or Current Focus Unit?	Housekeepin	Housekeeping/Lease Compliance
	Location	Staff Member/ Technician	Note any pests and circle the level of infestation. Involve your PMP.	Work order number or problem description	Check when completed	Yes or No	Housekeeping level* (circle one)	Action taken (e.g., met with tenant, sent violation notice)
			Type of Pest: Light Moderate Heavy				G F P	
			Type of Pest: Light Moderate Heavy				G F P	
			Type of Pest: Light Moderate Heavy				G F P	
			Type of Pest: Light Moderate Heavy				G F P	
			Type of Pest: Light Moderate Heavy				G F P	

* Housekeeping Level

G Good—little or no food or water accessible to pests, easy to move throughout the unit, and inspection in all areas is possible

F Fair—dishes left undone for more than one day, or plenty of food or water accessible to pests, or PMP has to step over or move items to inspect P Poor—multiple days of dirty dishes, sloppy food storage methods, or PMP's inspection and service limited by clutter

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your **IPM Team Roles**

Attachment E: Pest **Proofing Tips for Building Owners and** Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample **IPM Policies**

Attachment H: Resources

Attachment D: Your IPM Team Roles

Effective pest control involves the property owner, pest professional, building manager, maintenance staff, and residents. Programs work best when every partner understands their roles and how problems will be resolved.

Maintenance Staff

Provide regular housekeeping in common areas, hallways, stairwells, laundry rooms, trash chutes, garbage areas, and maintenance/utility areas, plus plumbing or water-related repairs. To address pest issues, maintenance staff should:

- Provide covered cans or covered dumpsters so that waste is effectively contained before pick-up. Clean compactor or trash chute areas regularly.
- Pest-proof by sealing cracks, holes and crevices, doors gaps, and other entry points (e.g., around pipes), to prevent potential pest entry. Complete during repair activities, unit turnover, and after referrals by pest professional.
- Keep landscape well-trimmed and maintained to reduce harborage.
- Respond promptly to pest complaints. Provide resident education when responding to complaints, during repair activities, and other resident interactions, as appropriate.
- Accompany the pest professional when he/she is on site, and for all inspections and service calls. Look for pest entry points during inspections, and provide quality control to ensure the pest professional follows model scope-of-work inspection protocols.
- Provide safe furniture removal for residents. Use furniture bags to remove infested furniture and clearly mark infested furniture to avoid re-introduction of pests to other apartments.

Property Manager

- Review and approve the baseline IPM Plan submitted by the Pest Control Contractor and work with residents to undertake appropriate actions.
- Respond to pest complaints within two days and arrange for treatment within three days.
- Provide written notice to residents a minimum of 48 hours prior to pesticide application.
- In conjunction with IPM contractor, conduct periodic education and outreach sessions for residents, as well as providing education during lease renewals and during pest infestations.
- Make arrangements for residents who are unable to follow pest control preparation instructions prior to treatment.
- Conduct unit inspections and respond to housekeeping issues to reduce pest harborage.

The Pest Control Professional (Contractor or Certified Staff)

Deliver IPM services in coordination with property manager and maintenance staff.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your **IPM Team Roles**

Attachment E: Pest **Proofing Tips for Building Owners and** Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

- Review pest control progress annually with owner, property manager, and maintenance staff.
- Provide quarterly updates to manager/maintenance, property owner and/or
- Adopt an IPM policy/commitment. Clarify roles for staff, property management, pest contractor, and residents.
- Provide pest professional access to all areas.
- Respond promptly to requests for information or pre-approvals from the contractor.
- Review pest issues quarterly, along with vendor assessment. This may also be done by property manager.
- Review pest control progress annually.

Resident Coordinator/Outreach/Support Staff

- Assist in providing access to apartments and common areas.
- Deliver tenant notifications.
- Accompany the IPM Contractor for inspections and subsequent service calls. Provide resident education during unit visits.
- Work with pest professional and manager to provide resident education and engagement.
- Provide assistance to residents who cannot complete unit preparation prior to treatment.

Residents

- Report to management pest sightings and conditions that may attract pests.
- Do not use foggers, bombs, sprays, or other pesticide products.
- Keep the home in a clean, clutter-free, and sanitary condition.
- Prepare apartment for pest management service visits or request assistance from management if tenant needs help.
- Do not disturb pest-monitoring traps set by pest professional or management.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your **IPM Team Roles**

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: Pest Management Opportunities During Building Renovations

Attachment G: Sample IPM Policies

Attachment H: Resources

Attachment E: Pest Proofing Tips for Building Owners and Managers

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Pest Proofing Tips for Building Owners, Managers and Staff

Integrated Pest Management (IPM) targets building conditions that encourage pests to live and breed by focusing on good building maintenance and timely repairs. Sealing cracks and holes, fixing leaks and improving garbage management deprive pests of food, water, shelter, and ways to get around. Many of these repairs are inexpensive and easily handled by building staff. Use reliable, long-lasting materials to improve the quality of building repairs, and remember to always follow label instructions.



Pest Proofing Materials

Refrigerator Door Gasket: Rubber seal around refrigerator door.

Sealant: Filler for cracks and crevices made of siliconized acrylic latex or ethylene copolymers. Sealant is more flexible, crack-proof, water-resistant and longer-lasting than traditional caulk. Use the appropriate sealant for each repair; for example, use concrete sealant for repairs on concrete walls.

Escutcheon Plate: Plates that fit snugly around plumbing and electrical pipes near wall penetrations, to prevent pest access. Generally made of stainless steel.

Backer Rod: Tube-shaped material that is used to help fill larger gaps and cracks.

Galvanized Wool/Mesh: Used to fill holes around pipes. Copper lasts longer and is more rust-resistant than steel wool.

Rodent Barrier Cloth/Hardware Cloth/Exclusion Materials Made of Stainless Steel or Copper Mesh:

Materials that act as barriers for rodent burrowing and nesting. Remember to wear gloves when handling.

Blown-In Cellulose Installation Treated with Boric Acid: Wall void filler that acts as an insecticide when treated with boric acid. It also helps maintain heating and cooling in the home, is fire retardant and is environmentally friendly since it is primarily made from recycled materials.

Insecticide Dusts: Dusts such as boric acid and diatomaceous earth. that are pesticides for insects.

Anti-Pest Door Sweeps/Thresholds:

Door sweeps block out rodents by closing gaps underneath exterior doors.

Landscape Cloth: Fabric that deters weed growth and rodent burrowing.

Pea Gravel: Loose gravel that separates landscaping from the building foundation and discourages rodent burrowing.

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Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

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Attachment F:
Pest Management
Opportunities During
Building Renovations

Attachment G: Sample IPM Policies

Attachment H: Resources

PEST PROO	FING BY AREA	A	
	Where to look	What to look for	How to pest proof
Kitchen	Refrigerator	Fallen food and sources of leaks behind refrigerator. Check refrigerator door to make sure it closes properly and has a good seal.	Remove all sources of clutter from around refrigerators. Sweep and vacuum behind and under refrigerators. Clean food residue, dirt and dust from behind and under fridge. Clean exterior and interior of the refrigerator. Replace door gasket with a new one based on refrigerator model number using a screwdriver.
	In and around cabinets and under sink basin	Crevices at wall junctions, in between cabinets, under sink basins and around cabinet trims on walls	Seal all gaps with sealant. Use backer rods for gaps larger than ¼ inch.
	Cabinet kick plates	Cracks and crevices	Seal crevices with sealant. Use hardware cloth or sheet metal for the larger structural gaps.
	Sink back splash	Gaps at the top edge and along the wall	Seal gaps with sealant and backer rods for gaps larger than 1/4 inch.
	Ventilation hood	Gaps around edges and built-in chases (spaces or grooves in masonry walls or through floors for pipes or ducts)	Seal gaps and build chases that can be opened for inspection and treatment.
	Utility and plumbing openings	Gaps around plumbing and gas line penetrations	Seal around pipe with copper wool/ rodent barrier cloth and install a two- piece escutcheon plate.
Living Room	Radiator pipe penetration	Gap around pipe penetration in wall or floor	Seal around pipe with copper wool/ rodent barrier cloth and install a two- piece escutcheon plate.
	Void under staircase	Spaces where pests can shelter	Treat void with granular boric acid and seal wall penetrations, or use blown-in cellulose insulation treated with borates and seal.
	Crawl space/attic	Openings in ventilation screens or utility doors	Install vandal resistant screens and door sweeps around utility doors. Use welded stainless steel ¼-inch screens, and wood or metal stripping or door sweeps.

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Attachment B: Model Request for IPM Proposals (RFP)

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Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

PEST PROO	FING BY AREA	\	
	Where to look	What to look for	How to pest proof
Bathroom	In and around cabinets and under sink basin	Crevices at wall junctions, in between cabinets, under sink basins, and around cabinet trims on walls	Seal all gaps with sealant. Use backer rods for gaps larger than ¼ inch.
	Shower	Gaps around basin and wall penetrations	Seal around gaps and wall penetrations with sealant and copper wool.
	Tub	Gaps, and worn caulking and sealant	Seal gaps, or replace with tile or other non-porous surfaces.
	Toilet	Gaps at edges and sides	Seal crevices and gaps with sealant and copper wool.
	Wall penetrations and water lines	Gaps around plumbing fixtures and wall penetrations	Seal crevices and gaps using sealant, escutcheon plates and copper wool.
All Apartments	Wall/floor junction	Gaps and crevices at junctions	Seal gaps between walls and floors before installing baseboards or crown moldings. Seal gaps and crevices and then paint. Use backer rods for gaps larger than ¼ inch, and sealant for porous surfaces if in bathroom or kitchen.
	Molding (i.e., decorative chair rail and crown molding)	Gaps at edges and sides	Seal and paint over when finished.
	Baseboards	Loose baseboards, and gaps between wall and floor	Seal gaps between walls and floors before installing baseboards. Seal tightly baseboards at wall junctures. Use backer rods and sealant for porous surfaces.
17/4/	Electrical outlets, light switches, fuse boxes and circuit breakers boxes	Missing or broken covers and gaps around edges and sides	Replace missing or broken covers. Seal around edges and sides.

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Attachment D: Your IPM Team Roles

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Attachment F: Pest Management Opportunities During Building Renovations

Attachment G: Sample IPM Policies

Attachment H: Resources

	Where to look	What to look for	How to pest proof
Common Spaces	Compactor room/ trash chutes	See Building Garbage Control and Compactor Maintenance	See Building Garbage Control and Compactor Maintenance
	Boiler and laundry rooms	Gaps around wall penetrations and under doors, cracks and crevices	Seal around pipes and electrical equipment using backer rods, concrete sealant, with epoxy or latex compound and copper wool/rodent barrier cloth.
Exterior	Exterior entry doors	Light penetrating underneath exterior doors, door threshold damage and gaps in door seal	Install door sweeps at the base of all exterior entry doors. Fit bottom of garage doors with a rubber seal. Line the bottom track of sliding glass doors with foam weather stripping.
	Exterior wall penetrations	Gaps around any areas where plumbing, electrical or cable services enter the building	Seal all gaps using backer rods and outdoor sealant.
	Gutters	Buildup of dirt and leaves from the roof and in gutters	Remove debris with rubber gloves and a gutter scoop.
	Exterior vents	Holes in fitted screens or missing screens on vents	Replace or fit broken or missing screens on vents using galvanized mesh.
	Landscape	Overgrown vegetation	Cut back overhanging branches and thick shrubs so they are 10 inches or more away from the building. Create a vegetation-free zone around the perimeter of the building. This perimeter should be three-feet wide and made from durable materials, such as landscape cloth covered by pea gravel.
	Entryway, paved private property	Cracks in pavement, sidewalks and concrete slabs	Remove cracked, crumbling or loose concrete with a small hammer and chise Seal using a putty knife and concrete sealant with epoxy or latex compound (works best on cracks ½-inch wide or narrower). For larger chips and cracks, use mortar mixes.

 $\label{lem:condition} \mbox{Adapted with permission from the San Francisco Department of the Environment.}$

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Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

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Pest proofing during renovation saves time and future costs by reducing resident pest complaints, minimizing the destruction caused by pests, and increasing the quality and value of the renovations. It also makes the building healthier for residents by reducing asthma triggers. During renovations, look for opportunities to fix leaks and moisture problems, seal cracks and holes, and use pest-resistant materials.

Before Renovation

Hire a pest management professional (PMP) with experience in Integrated Pest Management (IPM) to inspect the building, review resident complaints, and report pest conditions and discuss ways to eliminate them.

Talk to the PMP, architect, and renovation contractor about combining pest control activities with the upcoming renovation. Be sure to:

- Incorporate pest proofing measures into the renovation scope of services and architectural plans.
- Track progress by creating a list of pest proofing tasks that must be completed.

During Renovation

- Seal gaps in walls, floors, and joint areas using non-toxic sealing methods such as window screens, door sweeps, escutcheon plates, and elastomeric sealants.
- Use rodent and corrosion-resistant screens such as copper, stainless steel, or rigid metal cloth for openings greater than ¼ inch.
- Residential Apartments: Focus on closing cracks and gaps. Adult cockroaches can hide in a crack 1/16 of an inch wide, and mice can squeeze under a door gap the width of a pencil (¼ inch). Remember to:
 - Reduce gaps around door edges and along thresholds when installing doors.
 - Install door sweeps on front and main entry doors.
 - Seal entry points for water pipes, radiator pipes, risers, gas lines, and electrical lines.
 - High Efficiency Particulate Air (HEPA) vacuum, and wash walls to remove any pest debris (e.g., cockroach shells and insect excrement) before installing cabinets or kitchen appliances.
 - Install cabinets with doors that close tightly.
 - Seal edges between cabinets and walls. Seal any holes or cracks around appliances.
 - Seal baseboards and molding along floor and wall edges.
 - Repair water-damaged areas and fix leaks.
 - Require the pest management professional to treat wall voids with boric acid before walls are sealed.

Attachment A: Model Integrated Pest Management Scope of Services

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Attachment C: Sample Focus Unit Tracking Log

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Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policies

Attachment H: Resources

Common Areas and Exteriors:

- Check the building exterior for holes, cracks, gaps and crevices. Thoroughly seal all openings, especially in foundation areas.
- Talk to building staff about any problems with the current garbage management system.
- Make sure the garbage area is big enough to store the proper number of garbage cans with secure lids. The building should be able to securely store at least three days' worth of garbage.

Compactor Rooms

- Resolve compactor pest issues before dismantling the compactor or compactor room.
- Seal area during renovations to prevent pests from finding shelter in adjacent apartments.
- Install compactor chute doors that are large enough to fit a full garbage bag.

Renovation Work Areas

- Make sure garbage cans with secure lids are available on site for the workers and are emptied daily to avoid pests.
- Make sure food wrappers and other waste are not thrown into wall voids.

After Renovation

The pest management professional should identify any problem areas that need attention and address remaining concerns before building management makes apartments available to residents.

Keep pest control records and adopt a building-wide pest management policy that specifies how to inspect for and eliminate pests. Provide this information to residents.

- Schedule regular pest management inspections.
- Promptly fix structural and sanitation problems.
- Consult with the PMP about safe pesticide use for persistent pest problems.
- Assign a staff member to serve as "pest control coordinator" to oversee pest complaints and services.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your **IPM Team Roles**

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: Pest Management Opportunities During Building Renovations

Attachment G: Sample IPM Policiess

Sample Policy A

Sample Policy B

IPM Policy Elements

Attachment H: Resources

Attachment G: Sample IPM Policies

Below are two different sample policy options. The one that will work best for your organization will depend on your current culture regarding policy adoption. Sample Policy A is short and concise and may be most appropriate for adoption by a governing or advisory Board. Sample Policy B provides more details of an IPM program including pest protocol procedures, consistent with the Model Scope of Services provided in Attachment A.

Sample Policy A

The [Add Owner's Name] will use Integrated Pest Management (IPM) strategies to prevent and address pest problems within our properties to maintain safe, healthy environments for residents and staff, and minimize harm to the environment. Our IPM approach uses pest proofing strategies, trash management, maintenance/housekeeping, and limited and targeted use of the least hazardous pesticides based on need to prevent and control pest issues. Excluding bed bug treatments or the use of insect growth regulators, routine application of pesticide sprays, foggers or bombs, and organophosphate or chlorinated hydrocarbons pesticides are not permitted. Maintenance staff, pest professionals, and resident services staff will coordinate to prevent and respond to pest problems. Pest professionals shall have IPM training or certification.

The IPM program will involve a baseline inspection and annual inspection of units and common areas; monitoring of pest activity in interior and exterior spaces to guide responses; and development of building specific IPM plans. IPM plans will be reviewed annually with the pest professional and will describe:

- Pest focus areas and recommended treatment responses, including maintenance repairs, removal of pest droppings, housekeeping needs, and selected and targeted use of the least-hazardous pesticides;
- Preventative maintenance or trash management;
- Ongoing monitoring; and
- Recordkeeping to track treatments and related repairs.

At unit turnover maintenance staff shall inspect for evidence of pest activity, seal holes and cracks with pest proof materials, and report evidence of pest activity to the pest professional.

This policy emphasizes prompt, multifaceted action to identify, prevent, and treat problems. Resident awareness and support of this policy will help ensure its success.

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Attachment B: Model Request for IPM Proposals (RFP)

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Attachment D: Your **IPM Team Roles**

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policiess

Sample Policy A

Sample Policy B

IPM Policy Elements

Attachment H: Resources

Sample Policy B (Including more detailed pest protocols)

It is the policy of the [Name of Entity] to follow Integrated Pest Management (IPM) principles and practices to eliminate pest problems, and maintain healthy, safe environments for residents and maintenance staff. IPM targets the underlying causes of pest infestations by depriving pests of food, water, shelter, and building access. Through pest-proofing strategies, pest-aware maintenance practices, trash management, and selected and targeted use of the least-hazardous pesticides based on need, our IPM policy puts the needs and safety of residents and property staff as the foremost priority.

All properties will have an IPM Plan and an onsite IPM Coordinator. All pest vendors shall be IPM certified or trained. Elements of the policy include:

- A. Baseline Pest Inspection and Inspection Report
- B. Property-specific IPM Plan
- C. Regular Inspections, Monitoring and Recordkeeping
- D. Resident Engagement
- E. Limited and Targeted Use of Pesticides
- F. Pest-specific Protocols

IPM Policy Elements

1. Baseline Pest Inspection and Inspection Report

An initial baseline pest inspection of all interior and exterior areas shall be completed by our approved IPM-trained pest professional. The IPM professional shall inspect all apartments, common areas, basements, utility rooms, management offices, maintenance shops and storage, and building exteriors. A member of our maintenance staff must accompany the pest contractor during the inspection.

The results of the initial inspection shall be documented in a report or included in the IPM plan described below. Results include: areas inspected; pest activity observed (type and location of pests, and level of infestation); problem areas; number and placement of monitoring traps; and conditions in the building which contribute to existing and potential pest problems (i.e., pest related maintenance needs and housekeeping concerns); and any other information gathered during the inspection (including any inspection reports).

2. Property-specific IPM Plan and Recordkeeping

Each property shall have a property-specific written IPM plan prepared by our approved IPM trained pest professional. The pest professional will update the plan at least annually. The Maintenance Supervisor/IPM Coordinator must review the IPM Plan and approve it, or work with the pest professional to revise the plan based on site-specific needs. The pest professional will maintain the IPM Plan and all records.

The IPM plan will include:

- a. Description of problem areas and focus units (i.e., active or historic pest problems), using the result of the baseline inspection.
- b. Inspection schedule, performed no less than annually.

Attachment A: Model **Integrated Pest Management Scope** of Services

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Attachment D: Your **IPM Team Roles**

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policiess

Sample Policy A

Sample Policy B

IPM Policy Elements

Attachment H: Resources

- c. Monitoring strategies in areas that have active infestations, pest evidence, or conditions potentially leading to infestation, and have new pest evidence.
- d. Service schedule and pest control activities, including: sealing pest entry holes/cracks; removing pests, debris, food and dust with High Efficiency Particulate Air (HEPA) vacuuming and steam cleaners, or wet-cleaning methods; and pesticide applications consistent with this policy.
- e. Recommended maintenance, trash management, or structural repairs.
- f. Resident housekeeping issues and recommended responses, including resident education.
- g. Recordkeeping, including a dated treatment log that identifies dates of visits, a record of monitoring-device results, actions taken, pesticides applied, and locations.
- h. Pest inspection procedures for maintenance staff during unit turnover.
- i. Referral process between pest vendor and maintenance staff or property management.

3. Regular Inspections, Monitoring, Recordkeeping

- a. The pest vendor shall, at a minimum, visually inspect all properties (interior and exterior areas mentioned above) on an annual basis.
- b. The pest vendor shall deploy pest monitoring equipment as needed, consistent with the IPM Plan. (See #6 below: Pest Specific Protocols).
- c. Maintenance staff shall accompany the pest vendor on all inspections.
- d. The pest vendor shall maintain an IPM treatment log or access to electronic recordkeeping specified in the IPM Plan, plus any records that document coordination with maintenance and residence services staff. All records must accessible to maintenance supervisors/IPM Coordinator.
- e. At each unit turnover, maintenance staff shall inspect for evidence of pest activity, seal holes and cracks with pest proof materials, and report evidence of pest activity to the pest vendor.
- f. Maintenance staff responding to work order requests shall look for evidence of pest activity and report such activity to the pest vendor.

4. Resident Engagement

a. Notification

- Maintenance Supervisor/IPM Coordinator shall provide written notice to residents of pest vendor inspections, services or appointments, or the intent to apply to pesticides a minimum of 48 hours in advance.
- ii. Maintenance Supervisor/IPM Coordinator shall provide residents with instructions on how to prepare their units for treatment or service.
- iii. If bed bug treatment is scheduled, maintenance staff will inspect unit to confirm that it's ready for treatment.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your **IPM Team Roles**

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policiess

Sample Policy A

Sample Policy B

IPM Policy Elements

Attachment H: Resources

b. Resident Engagement

- Working in coordination with pest vendor, the Property Manager/IPM Coordinator will provide educational materials to residents in each unit, at least annually.
- ii. The Property Manager/IPM Coordinator, in conjunction with any Resident Services Coordinator, will hold resident meetings in properties with ongoing pest challenges.
- iii. Residents will work with the pest vendor and maintenance staff to reinforce resident housekeeping practices and reporting of pest problems.

5. Limited and Targeted Pesticide Use

- a. The pest vendor will apply pesticides based only on need and evidence of pest activity, and not by schedule.
- b. To minimize risk, the pest vendor will use the least-hazardous materials, with the most precise application technique.
- c. The pest vendor will apply only pesticide products or product categories (e.g., baits, gels, or dusts for cockroaches) that are included in the IPM Plan and approved by the Property Manager/IPM Coordinator.
- d. The pest vendor is prohibited from using foggers or bombs, organophosphate or chlorinated hydrocarbons, or broadcast or baseboard spray applications (unless it is an insect growth regulator or the pesticide is needed to address bed bug infestations).
- e. If it is necessary to vary from the above procedures, the pest vendor will request written approval from the Property Manager/IPM Coordinator.

6. Pest Specific Control Protocols

Pest vendors shall follow pest-specific protocols (insect, rodent, bed bug) described in the approved IPM plan and listed below.

1. General:

- i) Emphasis on non-pesticide methods as first and primary strategies.
- ii) Treatment services include: sealing openings, cracks, and entry points with expanding foam, copper mesh, metal hardware cloth, caulking, spackle joint compound, etc.; and removing pests, debris, and food debris with HEPA vacuuming or steam cleaning.
- iii) Coordinate with maintenance staff to seal larger holes, cracks, and address maintenance issues (e.g., leaks, moisture problems, trash management).
- iv) Inform Property/Building Manager or IPM Coordinator, as well as any Resident Services Coordinators, of findings.
- v) Provide housekeeping and other in-unit recommendations to the Property Manager, IPM Coordinator, and Resident Services Coordinator.
- 2. Insect Control (with focus on cockroaches):
 - During each service visit, give special attention to kitchen, bath, and laundry areas, including spaces beneath sinks, counters, appliances, etc.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

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Attachment D: Your **IPM Team Roles**

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policiess

Sample Policy A

Sample Policy B

IPM Policy Elements

Attachment H: Resources

- ii) Use sticky traps to monitor for cockroach or other insect activity.
- iii) Use insecticidal baits or dust formulations, and insect growth regulators for cockroaches, as a mode of action, consistent with #4 above, "Pesticide Use." Bait and other product formulations will be rotated as needed to improve efficacy.
 - 1. Remove old, dried gel baits before application of fresh bait.
 - 2. Use a HEPA vacuum to remove cockroach droppings, old evidence of cockroaches, and related debris.

3. Rodent Control:

- i) Seal holes and cracks that could allow entry for rodents, using durable materials (e.g., metal hardware cloth, corrosion proof stuffing in penetrations and door sweeps).
- ii) Because traps are a critical method of indoor rodent control and can be used to reduce rodent populations and monitor pest activity, the pest professional shall set traps throughout the service areas. Ensure that all snap traps are placed in secure locations that are not accessible to children or pets. (Note: Before using peanut butter in snap traps, ensure residents do not have nut allergies.)
 - 1. The pest professional will check traps on a schedule approved by the Building Manager.
 - 2. All trapped rodents and all rodent carcasses will be disposed of by the pest professional in an appropriate manner.
- iii) Obtain approval from the Building Manager or Maintenance Coordinator before rodenticide use. Use only when deemed essential and to supplement structural or mechanical controls and consistent with #5 above.
 - 1. All rodenticides, regardless of packaging, shall be placed in locations inaccessible to children, pets, wildlife, and domestic animals; or in EPAapproved tamper-resistant bait boxes labeled with the pest contractor's name and address.
 - 2. All bait stations must be securely locked or fastened shut.
 - 3. All bait stations must be securely attached or anchored to the floor, ground, wall, or other immovable surface, so that the box cannot be picked up or moved.
 - 4. Bait stations should be inspected during every service visit for monitoring purposes, to ensure stations are not providing harborage to non-target pests, and to check for tampering.

4. Bed Bug Control:

i) Confirm bed bugs visually. Inspections should target mattresses, sheets, pillowcases, other bed linens, box springs, bed frames, and headboards. Other furniture or bed bug harborage areas must also be inspected.

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Attachment D: Your **IPM Team Roles**

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policiess

Sample Policy A

Sample Policy B

IPM Policy Elements

Attachment H: Resources

- ii) In conjunction with maintenance staff, and when appropriate, consider use of moat-style traps to monitor activity around beds (used on bed legs) or other furniture. Failure to trap a bed bug is not proof that there isn't an infestation.
- iii) If necessary to confirm bed bugs, use a certified canine team to detect bed bugs and viable eggs. Certified teams include those from the National Entomology Scent Detection Canine Association (NESDECA).
- iv) Work with maintenance staff, management, and residents to address clutter and housekeeping issues.
- v) Use encasements on mattresses, box springs, and other furniture, if appropriate. Disposal of items infested with bed bugs is often not needed if the materials are encased and other steps to control infestations are taken. If necessary, due to level of infestation or condition of the item, wrap and remove furniture or bedding in plastic and label as bed bug infested.
- vi) Provide residents with clear pre-treatment instructions.
- vii) Treatments should include: vacuuming with HEPA filter to reduce heavy infestations only when used in conjunction with steam, heat, and/or targeted insecticides. Targeted insecticide use includes placement of diatomaceous earth (DE), using a power duster, around the interior perimeter of the unit (as needed, including under baseboards, in wall voids, in drop ceilings, behind faceplates, and other locations). Heat treatments shall document that the temperature reached a sufficient level (122 degrees F). A second treatment is often needed.
- viii) Monitor units abutting and surrounding the focus/treated unit using visual inspection, canines, and/or monitoring traps, as appropriate.
- ix) Unless the resident reports live Bed bugs, re-inspect no sooner than two weeks after treatment, to allow for new eggs to hatch.

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your **IPM Team Roles**

Attachment E: Pest **Proofing Tips for Building Owners and** Managers

Attachment F: **Pest Management Opportunities During Building Renovations**

Attachment G: Sample IPM Policiess

Attachment H: Resources

Attachment H: Resources

Massachusetts Laws and Regulations

- Massachusetts Pesticide Control Act at https://malegislature.gov/Laws/ GeneralLaws/PartI/TitleXIX/Chapter132b
- Massachusetts Pesticide Regulations at http://www.mass.gov/courts/case-legalres/law-lib/laws-by-source/cmr/300-399cmr/333cmr.html
- Massachusetts Sanitary Code at http://www.mass.gov/eohhs/docs/dph/ regs/105cmr410.pdf

Massachusetts Governmental Resources

- Department of Agricultural Resources, Pesticide Regulation in Massachusetts at http://www.mass.gov/eea/agencies/agr/pesticides/pesticide-regulation-inmassachusetts.html
- Department of Public Health:
 - Asthma Prevention and Control Program at http://www.mass.gov/eohhs/gov/ departments/dph/programs/community-health/asthma/
 - Bureau of Environmental Health at http://www.mass.gov/eohhs/gov/ departments/dph/programs/environmental-health/
- MA Executive Office of Energy and Environmental Affairs, Pesticide Program at http://www.mass.gov/eea/agencies/agr/pesticides

Other Resources (External Links)

- Entomological Society of America at http://www.entocert.org/about
- EPA Pesticide Program at https://www.epa.gov/pesticides
- Foundation for Professional Pest Management:
 - QualityPro at https://www.npmaqualitypro.org/
 - GreenPro at http://www.npmagualitypro.org/greenpro/
- Green Shield at http://www.greenshieldcertified.org/
- Healthy Housing Solutions at http://healthyhousingsolutions.com/hhtc/
- HUD Healthy Homes on Asthma at http://portal.hud.gov/hudportal/HUD?src=/ program offices/healthy homes/healthyhomes/asthma
- HUD Healthy Homes on Integrated Pest Management at http://portal.hud.gov/ hudportal/HUD?src=/program_offices/healthy_homes/healthyhomes/ipm
- National Pest Management Association at https://www.npmapestworld.org/
 - Bed Bugs Best Management Practices at http://www.pestworld.org/ media/562243/npma-bed-bug-bmps-approved-20160728-1.pdf
- National Center for Health Housing (NCHH) IPM http://www.nchh.org/Program/ HealthyHomesTrainingCenter/IntegratedPestManagement.aspx
- NYC IPM resources at https://www1.nyc.gov/site/doh/health/health-topics/ pests-and-pesticides.page

Attachment A: Model Integrated Pest Management Scope of Services

Attachment B: Model Request for IPM Proposals (RFP)

Attachment C: Sample Focus Unit Tracking Log

Attachment D: Your IPM Team Roles

Attachment E: Pest Proofing Tips for Building Owners and Managers

Attachment F:
Pest Management
Opportunities During
Building Renovations

Attachment G: Sample IPM Policiess

Attachment H: Resources

- Sheet Metal & Air Conditioning Contractors' National Association (SMACNA)
 IAQ Guidelines for Occupied Buildings Under Construction at https://isgweb.smacna.org/ISGweb/Purchase/ProductDetail.aspx?Product_code=1072
- StopPests in Housing at http://www.stoppests.org/
- U.S. Centers for Disease Control and Prevention, National Center for Environmental Health at https://www.cdc.gov/nceh/