



Item 11
December 14, 2007

BOARD OF DIRECTORS

Pest Management Program

To: Board of Directors

Report: TCHC:2007-184

From: City Building Committee

Date: November 16, 2007

Page 1 of 12

PURPOSE:

To provide the Board of Directors with an overview of a proposed Toronto Community Housing strategy for improved pest management.

RECOMMENDATION:

It is recommended that the Board of Directors receive the report for information.

CITY BUILDING COMMITTEE COMMENTS:

At its meeting on November 16, the City Building Committee received the report and recommended it be forwarded to the Board of Directors for information.

BACKGROUND:

Toronto Community Housing tenants have identified pest problems as a major issue impacting tenant satisfaction and enjoyment of their premises. In 2006, 30,000 work orders were issued for pest related complaints while spending approximately \$1 million on pest control measures. Experience shows that current treatment methods are not effective unless complemented with changes in staff and tenant behaviors. An integrated pest management program (IPM) will be adopted that supports a preventive approach focusing on the environment, early reporting and improved housekeeping and building management practices. This initiative reflects the Community Management Plan commitment to address issues of pest infestation in Toronto Community Housing (Buildings: Good State of Repair – Maintenance Improvement Program).

The strategies in this report are based upon a review of pest biology, best practice research on most effective approaches, and a set of actions that incorporate an IPM Program, a tenant education program, and performance based pest control contracts that seek to reduce pest related complaints by 40% over three years. This is a modest

goal, which could be exceeded with dramatic improvements by ambitious, proactive IPM strategies that are very clearly delineated in the IPM “chain of accountability” concept.

REASON FOR RECOMMENDATION:

Toronto Community Housing has been using two approaches: treatment on demand, and an IPM approach managed by Housing Services Incorporated in some Community Housing Units. Pesticides alone often prove to be a temporary solution, resulting in repeated treatments that fail to address the root cause of the problem, meaning eliminating the conditions pests need to survive: food, water and a place to hide. Eliminating the conditions that make a building an attractive home for pests is the first key step to controlling a pest problem. This also will minimize the need for repeated applications of pesticides.

The most frequently occurring pests in Toronto Community Housing are the German cockroach, house mouse, and bedbugs.

- The German cockroach remains the most successful pest species in structures worldwide. While low toxicity gel bait pesticides had helped reduce both infestation and also the use of residual insecticides, there have been problems with immunity.
- Mice can invade high rise structures but are especially troubling in row/townhouse complexes. Mice are mostly nocturnal, so they are not likely to be seen unless the infestation is severe. Mice often leave a trail in kitchen cabinets, drawers, and any other place they may have gone in search of food. They travel between units only requiring ¼ inch of access through small holes in walls and floors, vents, and along pipes. They also reproduce in a rapid fashion.
- Bed bugs have had an explosive increase in frequency during the last 6 years across North America and other parts of the world affecting landlords, hotels, student residences, hostels, and shelters. The main concentrations of bedbug infestations within Toronto Community Housing has been in the downtown core, particularly Community Housing Unit's 12, 13, 14 and 27. There is also a high concentration in some buildings in Community Housing Unit 5. Infestations of bedbugs, however, have been found in all Community Housing Units, therefore good practices are urgent to limit and prevent further spread of infestation. Proper preparation for treatment of bedbugs is an extensive detailed undertaking. This is especially difficult for seniors due to the physical effort, and is exacerbated when a unit is very cluttered. As bedbugs can hide almost anywhere, this makes control difficult if preparation is not performed properly.

The metric used to determine the extent of infestations is measured activity at the Community Housing Unit (units treated) as well as frequency of treatments in units. In

addition, standard data collection at treatment that characterizes both extent of infestation as well as related factors (housekeeping, preparation) are tracked.

Toronto Community Housing's experience indicates an effective pest control program requires a balance between professional pest control services and tenant/staff education/participation as well as oversight to ensure IPM principles are in effect. The tenant education component and appropriate support are just as important as the treatment itself. A "Chain of Accountability" approach where all stakeholders hold a clear responsibility for their role in pest management has shown to be most effective in pest management.

Current Issues

Pest control management is a key concern for staff and tenants. Issues have been raised by both groups that have impacted Toronto Community Housing's ability to control pest problems:

1. Staff Need to be Better Informed and More Proactive

- Increasing staff understanding of pest biology and proliferation is a key focus of Toronto Community Housing's pest management program.
- Lack of staff attentiveness to individual pest complaints can generate the spread of infestations throughout the building.
- Staff do not connect other activities to control pests, i.e., waste management practices, sealing of cracks and holes to prevent mice migration.
- When a unit is identified for treatment, staff and contractors do not consistently inspect adjacent units for spreading.
- Due to budgetary constraints, some staff purchase the cheapest services but the quality of service is not maintained.

2. Tenant Behavioral Changes and Related Issues

- Tenants will pick up used furniture or mattresses from waste bins that have been infected from the previous owner.
- Poor housekeeping by tenants influence pest occurrence. Hoarding is a major factor in both focal infested unit issues and fire safety.
- Pests are transported through cardboard boxes, e.g., grocery shopping or delivery services.
- Some tenants do not complain of pests within their units and a unit problem can go unnoticed by staff until a unit inspection or other another workorder is being addressed in the unit.
- Unit preparation requirements for pest treatments are onerous and may not be followed by tenants. This minimizes the effectiveness of treatment.

- Since the preparation can be difficult for those with mobility or mental health issues, treatments cannot be carried out as planned, or reinfestation occurs shortly thereafter.

3. *Using Only Qualified Reputable Contractors*

- Currently, not all contractors employed to treat pest infestations are pre-qualified by Toronto Community Housing. This has resulted in reduced accountability and a lack of clarity with regards to contractor expectations and outcomes.
- Toronto Community Housing recognizes that a more flexible response to tenant treatment requests is necessary in order to increase the effectiveness of pest control.
- At present, after a request for pest control is received from a tenant, treatment is arranged by Housing Services Inc, per a fixed delivery schedule. Tenants who request pest control after a scheduled treatment date could wait several days before their units are treated.

The Program

Toronto Community Housing will implement a proactive, holistic approach to pest control. The end result will be sustainable and environmentally safe processes focused on reducing pests and overall pesticide usage, with reliance on data collection from a variety of sources including the annual unit inspection information as a basis for pre-emptive action to deal with pest infestations before they escalate and spread. The annual Unit Inspection Program enables identification of obvious infestations. This can be improved by inspectors being trained to look for specific indications. This is an added benefit to the annual unit inspection and can be accomplished within a very short timeframe. Tenant surveys targeting pest control are an additional approach that emphasizes tenant feedback and provides excellent information to enable planned cost-effective treatments.

All Community Housing Units will adopt an Integrated Pest Management (IPM) approach. IPM uses a variety of methods to control pests. Chemical pesticides are part of the IPM Program however, considerable efforts is also put towards preventing pest problems by controlling condition which may attract and support pests. IPM focuses mainly on eliminating or reducing sources of food, water, harborage that are available to pests, and limiting pest access into and throughout buildings. Control measures such as waste management, and building maintenance are strong elements of a structural IPM Program. The success of such a program requires the collaborative efforts of everyone involved in the management and maintenance of a building including building staff, contractors, and tenants. Education and cooperation are necessary parts of the IPM Program.

Benefits of IPM

IPM has been proven in a number of settings to draw upon the following benefits:

Better Pest Control

Effectively applied, IPM programs have shown to provide better results and last longer than traditional pest control. The approach is proactive, not reactive. The program improves detection of a potential pest problem before it's a major problem.

A Safer and Healthier Building

Both pests and pesticides pose health concerns for building occupants. IPM is being recognized by many experts as the best means to control pests effectively, while using the least amount of pesticide necessary.

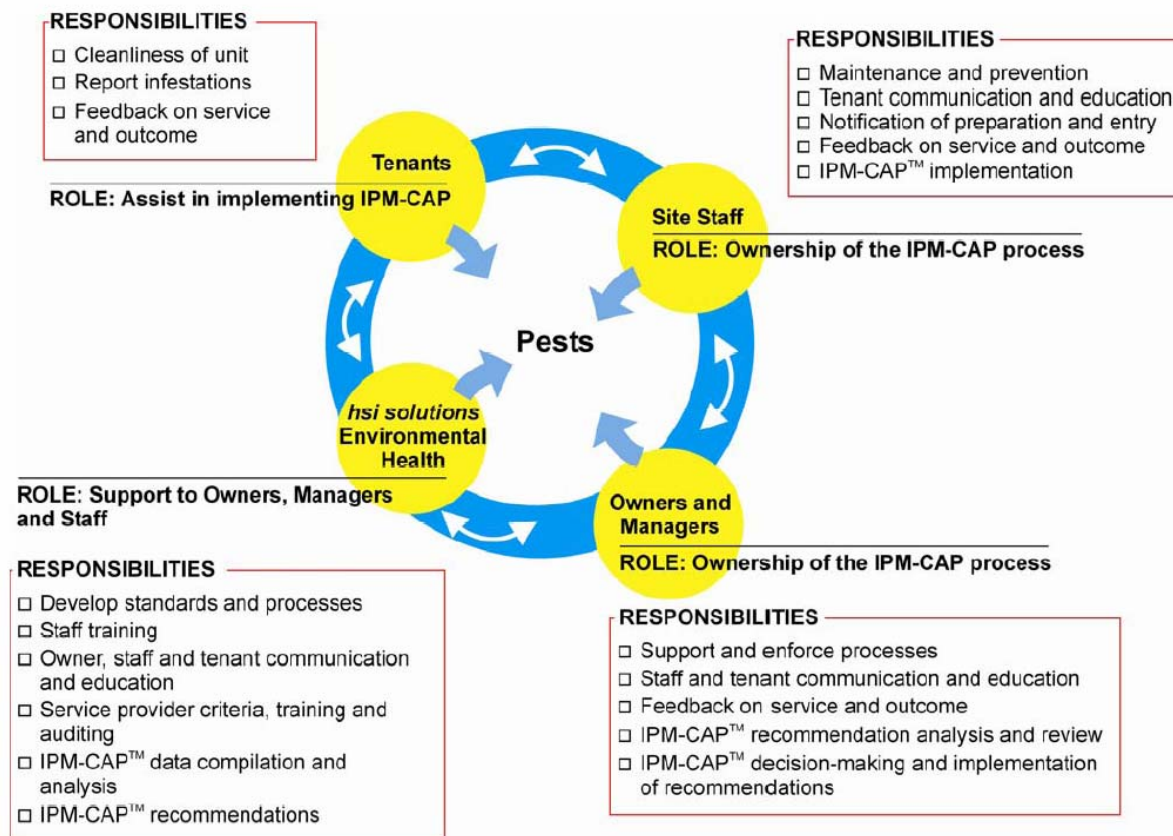
Lower Costs

IPM programs result in lower costs than traditional pest control programs. Some pest control costs may rise initially when certain aspects of an IPM program are put into place. Over time however, these costs usually balance out in terms of savings in pest control, or other budgets. There is less of a need for full-building pest control treatments and tenants disruption is minimized.

Better Public and Tenant Relations

IPM is a proactive method of controlling pests which demonstrates that building management is environmentally conscious and is concerned about the health of tenants.

The "Chain of Accountability" identifies roles and responsibilities of tenants, staff, managers and service providers. The Program will focus upon tenant and staff communication and education, preventive maintenance, intensive follow up and marshalling of resources to assist with ancillary duties that increase the effectiveness of the Integrated Pest Management Program. *(Diagram Source: Housing Services Inc.)*



Toronto Community Housing’s IPM Program will include the following components:

1. Define Toronto Community Housing’s IPM approach.
 In accordance with Toronto Community Housing’s “green” culture, this Program will have the goal of reduction of pesticide use as one of the primary IPM objectives. The proposed processes will be focused on education of staff and tenants in prevention as well as ensuring sound IPM principles. Because IPM relies on a variety of techniques to control pests rather than relying exclusively on the use of pesticides, it can reduce health and ecological risks associated with

the use of potentially toxic chemicals. The goal of IPM is to reduce exposure to both pests and pesticides.

2. Supporting staff.

In 2006, approximately 2% of households were found to have obvious housekeeping and/or infestation issues during the annual Unit Inspection Program. As noted above, this program will be enhanced to improve detection of the most common infestations, namely those of cockroaches, mice, and bedbugs. This year the Unit Inspection Program was modified to automatically generate letters to tenants and to trigger appropriate actions, including staff intervention and identification of units as focal infested units in order that future inspections can address this issue from a preventive perspective.

A central part of the education process will be the training of staff to support aging tenants, as well as tenants with mental health issues to understand and fulfill their responsibilities with regards to pest management. Due to the pattern of tenants who have recurring pest infestation incidents, the success of an IPM Program will be also be dependent upon the Mental Health Framework that is currently under development to help address mental health and isolation issues that impact a tenant's ability to prepare for treatment and follow up.

Planned treatment such as entire floors, block or entire building is based on assessment of infestation levels through review of frequency of service requests, pertinent data collection, tenant surveys and especially identification of focal units. In the case of bed bugs, a block of units around the focal unit should be treated to contain the spread. This necessitates a clear methodology such as adjacent unit inspections. An IPM approach precludes full building treatment as a reactive response without reasonable prior assessment whether for preventive or control purposes. This is one of the cornerstones of IPM practice. Staff has identified strategies to address problem areas in order to best manage treatment rather than a reactive blanket treatment of all units when this may not be necessary. These strategies are:

- focal unit tracking/reporting/action;
- common area inspections/recommendations with emphasis on preventive measures;
- unit inspection tracking, including notation of housekeeping practices;
- prevention through design (e.g. kitchen cupboard installations);
- specific preventive measures during refurbishment and/or move out unit preparation;
- adjacent unit inspections especially for bed bug control; and
- use of low or no pesticide methods whenever possible such as, vacuuming, use of low toxicity products when possible (bait for cockroaches), etc.

3. Supporting tenants.

Tenant education is a very important component to encourage prevention by good housekeeping/sanitation practices, and appropriate early treatment when infestation is found. For example, tenants are encouraged to report any infestation whether found in their own homes or in a hallway or garbage chute room so that appropriate control measures are arranged. While it is preferred that tenants report infestations for professional treatment, tenant education also focuses on safe pesticide usage, and discouraging repetitive treatments by tenants that are ineffective in most cases.

Toronto Community Housing will develop and implement an education program for tenants and stakeholders that will feature tenant IPM facilitators who will be trained by Housing Services Inc. to provide support in their own communities working with tenants, staff, and pest contractors

In order to respond to those tenants who may need assistance preparing their units for treatments, Toronto Community Housing will form partnerships with community agencies who can offer cleaning/decluttering services for a modest fee. Furthermore, a community economic development opportunity will also be explored to assist tenants in preparing and managing pest infestations. New behavior patterns may be more effectively reinforced in tenants, if the behaviors are advocated by their peers. This initiative will also offer tenants gainful employment.

4. Determine contract provisions.

Toronto Community Housing will use Housing Services Inc. to implement an IPM Program and to pre-qualify pest control service providers based upon specifications that outline an IPM approach. While implementation of the Program is a Community Housing Unit undertaking, it is essential that standards of practice are consistent, and that the IPM data is managed centrally. This is especially critical to limit spread of infestation of bedbugs between buildings and between Community Housing Units. This is also central to good contract administration and partnerships with contractors in providing best practices to solve and prevent pest problems. The use of this approach with contractors defines common goals shared by the contractor and Toronto Community Housing.

Under the auspices of the Pest Management Program, a request for proposal will be issued that will include specifications regarding:

- the type of products to be used by contractors during treatment;
- performance monitoring;
- contractor expectations (adherence to the Integrated Pest Management Program, etc.); and
- contractor incentives for sustained results and provision of additional support and education to tenants.

Toronto Community Housing's pest management program will include the development of an improved pest treatment process focused on providing treatment on a more flexible, priority basis.

5. Record keeping and evaluating program progress.

Data collection and analysis will provide continuous monitoring of the efficacy of the Program and will identify addresses where emerging pest issues occur, so that follow up treatment can be actioned before pest infestations reach serious levels. The successful management of pest problems in multi-dwelling structures is to a large degree the management of a relational problem – that is the relation of many dwelling units to one another. The practices or unreported infestation in one unit will likely have an effect on other units.

Good management of information about pest problems in housing is absolutely essential as an IPM practice. It provides a history of problems, of frequencies of service requests both in the building and in individual units, and when properly managed, it enables good control strategies and outcomes.

Monitoring of relative pest population levels, building conditions and other factors that might influence the successful management of pest problems will form part of the IPM Program. Information gained through monitoring is critical for determining whether control measures—chemical or otherwise—are necessary.

6. Partnerships with companies.

Toronto Community Housing will explore the possibility of partnering with companies such as Goodwill, that could provide or assist tenants in procuring furniture to replace items damaged by pests in their units, or products that could help support better housekeeping methods.

Timelines:

Milestone #1 – Q4 2007: Work plan Developed

- Pest biology and Integrated Pest Management Program studied.
- 2006 pest control costs examined.

- Modify unit refurbishment specifications that include sealing apartment cracks to prevent pest migration in the most vulnerable areas: kitchen and bathrooms, during construction.

Milestone #2 – Q1 2008: Prepare Integrated Pest Management Specifications and Tender

- Research with Housing Services Inc. and prepare tender for multiple contractors.

Milestone #3 - Q2 2008: Draft Protocols Developed

- Draft referral protocols that will enable Toronto Community Housing to work with community based organizations to provide supportive services to tenants with mental, cognitive and/or physical disabilities. This will be an extension of the protocols being developed under the Mental Health Strategy and the timing coincides with that initiative.
- Staff training program developed and implemented.
- Tenant animators to act as building catalysts for pest eradication to be trained and supported.
- Investigate feasibility of tenant CED opportunity.
- Draft communications plan developed.

CONCLUSION:

This report outlines the approach Toronto Community Housing will adopt to implement an IPM in all communities. Toronto Community Housing will work with Housing Services Inc. to undertake the most appropriate and effective response to pest infestation utilizing the principles of IPM with emphasis on the chain of accountability. As IPM decisions of treatment are based on good information regarding both specific cases and overall extent of infestation, emphasis will be focused on preventive measures by staff and by tenants. Along with unit specific information, and tenant pest control satisfaction surveys, the annual Unit Inspection Program will enable progressive actions to significantly reduce the incidence of pest infestations in Toronto Community Housing while ensuring that pesticide usage is minimized and well managed. The quality of services shall be ensured by prequalification of pest control contractors as well as measures of performance detailed in the IPM specifications as the standard for all Toronto Community Housing communities.

FINANCIAL IMPLICATIONS:

The current operating budget includes \$1 million for contractor pest control services. An investment of \$200,000 has been allocated in the current 2007 operating budget for the implementation of the following components of the Integrated Pest Management Program:

- Program management and effectiveness service agreement	\$130,000
- Staff training program	\$30,000
- Tenant training programs at 30 Toronto Community Housing Buildings (most problematic buildings based on experience to date)	\$40,000

In addition, start up funds for the development and implementation of a community economic tenant business opportunity will be explored in 2008. A cost to support this work of \$200,000 has been estimated and will be included in the 2008 Investment Plan pending budgetary approval.

COMMUNICATIONS IMPLICATIONS:

N/A

LEGAL IMPLICATIONS:

N/A

CONSULTATION:

Central to the Program will be a consultation process that will include input from tenants, staff, community partners, mental health services and supportive housing providers, as well as other external stakeholders. It is anticipated that consultations will take place in Q1 2008. Extensive consultation will take place to inform tenants, staff and other stakeholders about the Integrated Pest Management Program and to utilize feedback to enhance and improve the Program.

Toronto Community Housing will also seek and train tenant IPM facilitators in buildings to champion the IPM approach, help educate tenants, provide support in preparation and promote a pest free community.

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