



CITY OF HAMILTON
PUBLIC HEALTH SERVICES
 Health Protection Division

TO:	Mayor and Members Board of Health
COMMITTEE DATE:	June 15, 2015
SUBJECT/REPORT NO:	Trends and Response to Rats in Hamilton - BOH15020 (City Wide)
WARD(S) AFFECTED:	City Wide
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SIGNATURE:	

RECOMMENDATION

- (a) That Public Health Services develop additional rat control resources for homeowners based on best practices of integrated pest management;
- (b) That Public Health Services, Planning & Economic Development, and Public Works continue to coordinate efforts to respond to rat complaints, including the use of by-law enforcement and targeted sewer baiting, as part of a comprehensive integrated pest management plan.

EXECUTIVE SUMMARY

In 2014, a significant increase in rat complaints compared to previous years was identified by Public Health Services (PHS) (Figure 1). In order to maintain an ideal response time of two business days, a maximum response time of five business days, and support residents in managing rats; Council approved a budget increase for 2015

for a 0.5 FTE Public Health Inspector (PHI) position. Concurrently, PHS has also been investigating potential causes of increased complaints, along with potential remedies.

Potential Causes of Increased Rat Complaints

Climate change and development are two theories for changes in rat populations and increased complaints. The rise in rat complaints could be due to weather events such as flooding, warm and rainy summers, and long, cold, snow-covered winters. In a winter with long snow cover, rats are protected from predators and the cold in their underground burrows. The past two winters in Hamilton have seen cold temperatures and snow accumulation that tended to stay on the ground for the duration of the winter. There have also been increased flooding events in other seasons and warmer temperatures. It is anticipated that the longer-term effects of climate change, which include more frequent and severe weather events, along with an overall rise in temperature, may support the rat population.

An increase in urban and suburban development is another theory for an increase in rat complaints, however development does not directly affect the numbers of rats, instead it can displace existing colonies and spread rat populations.

The reasons for the persistence of rat populations are complex and not fully understood due to a lack of formal research. Rats are opportunistic and highly adaptable and will thrive in cities. Rats can establish colonies as their three essential needs are easily met in urban areas: access to food, water and shelter.

It is difficult to confirm why there was an increase in rat complaints in 2014. We do know there are effective control and exclusion measures that can reduce or eliminate populations. Therefore, rat control education and efforts are a vital component in addressing the problem.

Predicting Rat Trends in Hamilton

PHS has explored the use of models to predict rat populations in Hamilton. Currently, no evidence-based predictive models for rat populations exist. However, if the trends for rat complaints continue, PHS expects to see increased numbers in 2015. This is supported by numbers to date in 2015 (24 as of April 30, 2015) which exceeded the complaints to the same time in 2014 (6 as of April 30, 2014).

Responding to Rat Complaints

Given the increase in rat complaints to date in 2015, PHS will continue to distribute information to property owners to help them understand rat behaviour, how to maintain their properties to discourage rats and how to prevent rat entry into their buildings. Proactive education measures include the use of social media platforms such as Twitter, Facebook and YouTube. Our plan also includes outreach to neighbourhoods where active rat problems are identified with information shared via local newsletters and neighbourhood action group meetings. Current practice also involves distribution of information on prevention and control measures at the first indication of rat problems.

Additionally, PHS enforces Section 26 of the Property Standards By-Law 10-221. This By-law requires that all property owners maintain their property free of infestation by pests, including rats. PHS will continue to investigate and respond to rat complaints by:

- Assessing the property and surrounding properties for signs of rats/rat infestations and what may be attracting rats (food sources, places to nest).
- Referring any property standard violations to Municipal Law Enforcement.
- Requesting local sewer baiting by Public Works (PW).
- Offering information to property owners about rats and their control.
- Enforcement via legal order to property owners to eliminate the infestation is done when all other education and outreach measures have failed.

Alternatives for Consideration – see page 8

FINANCIAL – STAFFING – LEGAL IMPLICATIONS (for recommendation(s) only)

Financial: There are no additional financial implications in implementing the recommendations beyond the approved 2015 budget.

Staffing: The recent Council approval of a 0.5 FTE, has resulted in a total of 1.3 FTE to investigate and enforce rat, and all other pest complaints, under the Property Standards By-law No. 10-221 Section 26.

Legal: There are no new implications in implementing the recommendations.

HISTORICAL BACKGROUND (Chronology of events)

PHS experienced an increase in calls in 2014 prompting a review of rat complaints from the previous four years. Figure 1 shows the increase of rat complaints in 2014. Many of the complainants were homeowners and long-time neighbourhood residents who had no prior sightings of rats in their neighbourhoods. Rats are a nuisance and the resulting stress on homeowners should not be under-estimated.

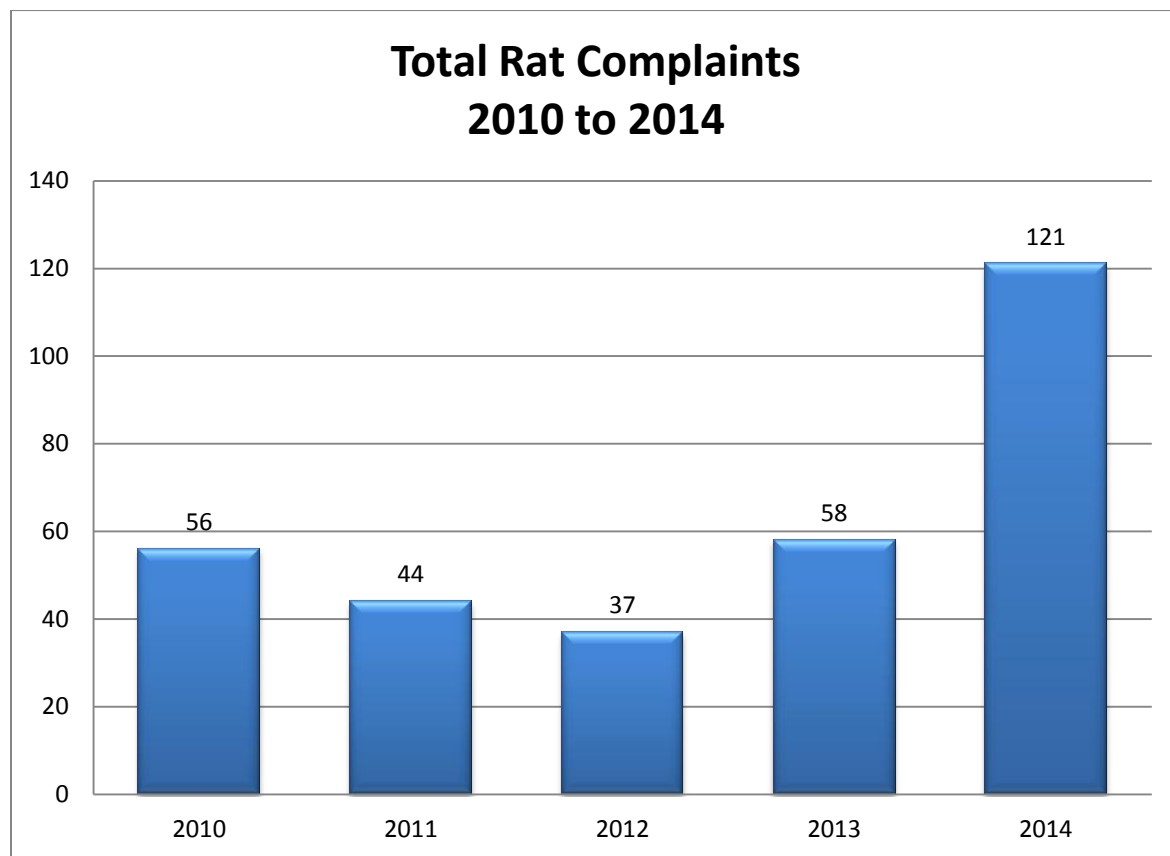
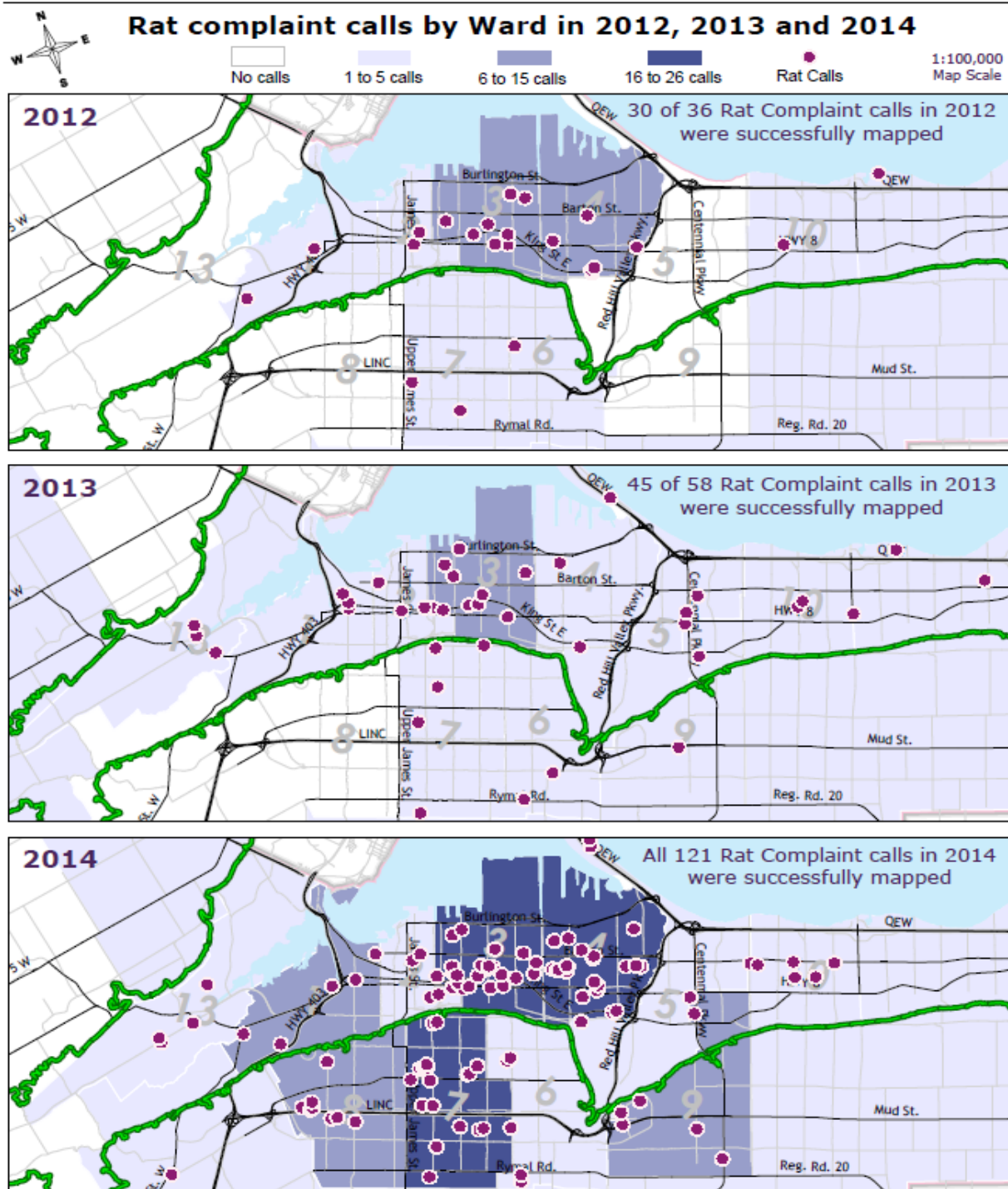


Figure 1 – Total Rat Complaints by Year 2010 to 2014

Sources of rat complaints, while originating in the downtown area (Wards 2, 3 and 4) have subsequently spread (Figure 2). As of 2014, the only Ward not reporting rat complaints was West Flamborough/Beverly (Ward 14); likely attributable to the comparatively lower population density.



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Figure 2 – Rat calls distributed by location from 2012 to 2014. Note: Not all complaints successfully mapped for 2012 and 2013 due to inadequate location information.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

PHIs enforce the City of Hamilton Property Standards By-law No. 10-221 Section 26 dealing with Pests.

PESTS

26(1) A dwelling or a dwelling unit shall be kept free of infestation by pests.

26(2) The owner of a property located within the urban boundary of the City as defined in the Official Plan or Official Plans for the City shall keep the property free of infestation by pests.

26(3) For the purposes of subsections 26(1) and 26(2), an “infestation” includes the presence of one rat or mouse, and in the case of bed bugs, fleas, wasps, hornets or cockroaches means the presence of more than one such insect, and in the case of wasps or hornets includes the presence of any occupied nest inside or attached to the exterior of a building, structure or other erection.

RELEVANT CONSULTATION

Given the scope of the rat complaints, the increase in number and distribution across the City, PHS has collaborated with other City departments and external scientific experts to better understand compounding factors and potential rat management strategies. Effective rat management programs require a coordinated effort among all essential City agencies. Work with other City of Hamilton departments is highlighted below:

Planning & Economic Development Department

Since 2014, PHS has been working closely with Municipal Law Enforcement (MLE) to address issues which may support rat populations, including illegal dumping, improper storage of waste, tall grasses and improperly maintained properties. PHS and MLE have been conducting more joint inspections of properties and communicating to provide a more robust response to rat complaints. A rodent control information section will be included in MLE’s By-Law 101 and Property Standards brochure. When a Property Standards violation is identified by MLE, the brochure will be given to residents and property owners. Additionally, the brochure will be available at the MLE office and at various community meetings (See Appendix A).

Public Works Department

Baiting of sewers is a common strategy in cities and effective when evidence of rats is present. The Norway rat, the species common in Hamilton and other urban environments, like to live on or under the ground. Sewers provide shelter, access to water, potential food sources and transportation routes so sewers can be ideal habitats for rats.

When multiple rat complaints occur in Hamilton that involves single streets or larger areas of a neighbourhood, PHS requests PW target and bait the nearby sewers. PHS and PW developed a referral system to further prioritize sewer baiting based on the extent of infestation in a neighbourhood. This improved communication process will result in better coordination of treatment for neighbourhoods.

In 2014, PW baited 121 sewers, more than double the number of sewers than other reported years (Figure 3). At a cost of \$75 per manhole, the total cost of sewer baiting over the past 5 years was approximately \$18 000. This cost is covered within the PW budget.

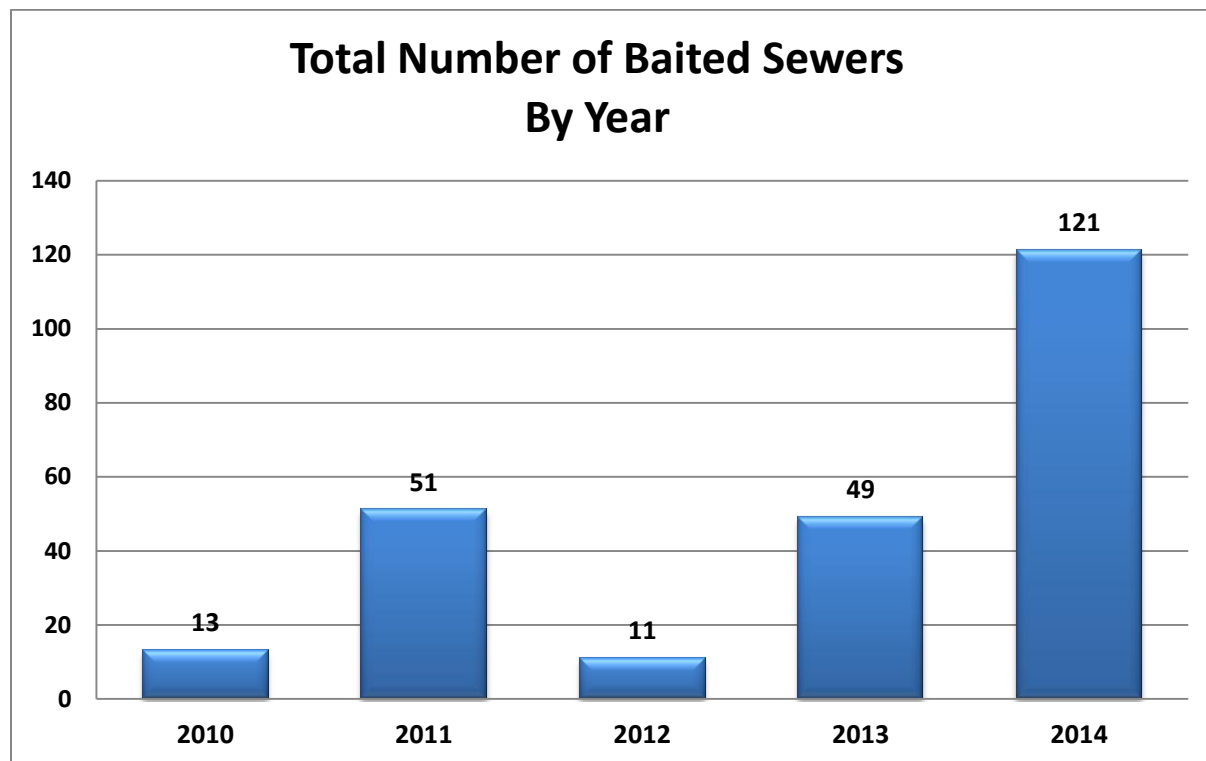


Figure 3 – Sewers baited for rat control by Hamilton Public Works 2010 – 2014.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

(Include Performance Measurement/Benchmarking Data if applicable)

PHS continues to see increases in the number of rat complaints for 2015. As of April 30, PHS had 20 rat complaints compared to seven in 2014, 12 in 2013 and nine in 2012 at the same time of year. PHS will continue to increase education and awareness around rats and rat control in an effort to assist homeowners in managing these pests. PHS will monitor rat complaints and report back to Board of Health on rat trends and recommended changes to the rat management approach as needed.

Knowing that rat behaviours are driven by their need for food, water and shelter; efforts will be made to educate the public on how to eliminate sources of food and water and how to seal up spaces in homes or other buildings where rats could gain entry.

Planned education and outreach items for 2015 are listed below:

- Rat Video to be developed in the Spring/Summer 2015.
- Messaging be created and shared on the corporate Twitter account.
- Newsletters about Rat Control to be developed and sent to communities /neighbourhoods /councillors in the fall and spring.
- A joint publication between MLE, PHS and Animal Control about By-Law 101 with information about rats included has been finalized and will be distributed by MLE when violations are cited and through appropriate community outreach events (See Appendix A).
- Guest posting on Facebook with a rat control focus was held on May 1, 2015 on the PHS Family Health Facebook Page.
- Improvements to rat control information to be developed and posted on the City website.
- Through PHS involvement with the One Health Initiative an article will go in Pets Magazine (national distribution) about rodents, including rats and how controlling rats and rodents is good for One Health (animal and human health).
- In May 2015, a PHS PHI attended New York City Department of Public Health and Mental Hygiene Rodent Academy to learn more about rat behaviour and effective control measures.

ALTERNATIVES FOR CONSIDERATION

(Include Financial, Staffing, Legal and Policy Implications and Pros and Cons for each alternative)

PHS could focus solely on enforcement without an education component. PHIs would only respond to complaints and issue orders to property owners to eliminate infestations.

Financial: Education resource costs could be reallocated to other program areas.

Staffing: No staffing implications.

Legal: An increase in orders could result in increased consultations with Legal Services and additional time in court proceedings.

Policy Implications: No policy implications.

Pros: No pros

Cons: This alternative would not result in reduced workloads and the public would lack access to City resources on how to control rats/rodents. Focusing on enforcement is not likely to have a long-term positive impact on rat populations in the City of Hamilton as it is responsive rather than proactive.

ALIGNMENT TO THE 2012 – 2015 STRATEGIC PLAN

Strategic Priority #1

A Prosperous & Healthy Community

WE enhance our image, economy and well-being by demonstrating that Hamilton is a great place to live, work, play and learn.

Strategic Objective

- 1.5 Support the development and implementation of neighbourhood and City wide strategies that will improve the health and well-being of residents.
- 1.6 Enhance Overall Sustainability (financial, economic, social and environmental).

Strategic Priority #2

Valued & Sustainable Services

WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.

Strategic Objective

- 2.1 Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.
- 2.2 Improve the City's approach to engaging and informing citizens and stakeholders.
- 2.3 Enhance customer service satisfaction.

Strategic Priority #3

Leadership & Governance

WE work together to ensure we are a government that is respectful towards each other and that the community has confidence and trust in.

Strategic Objective

- 3.1 Engage in a range of inter-governmental relations (IGR) work that will advance partnerships and projects that benefit the City of Hamilton.
- 3.2 Build organizational capacity to ensure the City has a skilled workforce that is capable and enabled to deliver its business objectives.
- 3.3 Improve employee engagement.

3.4 Enhance opportunities for administrative and operational efficiencies.

APPENDICES AND SCHEDULES ATTACHED

Appendix A to Report BOH15020 – Rodent Control Fact Sheet