THE DEFEND THEM ALL FOUNDATION

July 2025

Corporation of the City of Toronto
Toronto City Hall 100 Queen Street West
Toronto, ON M5H 2N2

Re: Toronto Rat Response Plan - Report for Action

Dear Honourable Mayor and Council of the City of Toronto:

Thank you for the opportunity to provide feedback on Toronto's Draft **Rat Response Plan.** We appreciate that the City has acknowledged the importance of a holistic approach that prevents undesirable interactions between rodents and humans. However, we are concerned that the current plan endorses a reactive framework that is more likely to perpetuate and intensify dependence on chemical controls, rather than advance their reduction through long-term prevention-based strategies.

Defend Them All (DTA) is a nonprofit organization dedicated to securing a better future for animals and their habitats through community advocacy, education, and legal guidance. In furtherance of this aim, DTA supports and collaborates with advocates striving to make a difference in their community. The organization is independent and non-partisan. It receives no money, either directly or indirectly, from any government.

As an international organization focused on issues at the intersection of animal and environmental law and policy, Defend Them All is part of the growing movement to reduce the harm caused to animals and the environment as a result of rodenticides. As such, we are excited to see a growing awareness of this issue and a clear shift towards better solutions.

In the comments that follow, we provide constructive feedback and recommendations to align Toronto's approach with modern, science-based pest management, rooted in prevention, structural exclusion, and ecological integrity. We urge Council to take bold, evidence-informed action, and to position Toronto as a leader in safe, sustainable and humane pest management. Such leadership is consistent with this Council's commitment to the environmental wellbeing of the Corporation, and the health, safety and well-being of its inhabitants.

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Integrated Pest Management

We appreciate that the City's Draft Plan highlights Integrated Pest Management (IPM) as its guiding strategy. However, the Plan omits core components of IPM as recognized in science and policy, and places undue emphasis on rodenticides, referencing their "important role" and citing ongoing "treatments." This reflects an outdated understanding of IPM and dilutes its intended purpose.

While definitions of the term vary and continue to evolve as new science and management techniques emerge, IPM refers to a strategic approach that aims to reduce risks to humans and the environment by only using pesticides (including rodenticides) as a temporary, last resort.[1] More specifically, IPM advocates for exclusion, prevention, attractant reduction, habitat modification, non-chemical control methods such as snap-traps, and biological controls whenever possible.

Rodenticides do not address the root cause of a rodent infestation problem, but rather rely solely on methods of killing that facilitate the rebound of populations.[2] By eliminating a resident colony, rodenticides just temporarily clear the way for a new population to move in.[3] Rodents are drawn to areas where they have access to food and shelter, and baits–flavoured and coloured to attract–are recognized as a food source to revisit. For these reasons, structural rodent problems will be never-ending until access points to these resources are sealed or eliminated. Even among pest control professionals, there is broad recognition that while poisoning may appear to be the simplest and cheapest short-term solution, it fails to deliver lasting results because it does not address the conditions that support infestations.

Alternative approaches to poisons do exist, and a transition to chemical-free methods could be done with relative ease and would prove cost-effective for the City of Toronto in the long run. However, explicitly requiring structural exclusion and the elimination of attractants before chemical methods are deployed is key to developing an effective, precautionary policy aligned with public and environmental health principles. This includes areas in and around construction sites, where disrupted burrows may lead to temporary increases in rodent activity near new subdivisions. In all cases, development plans must prioritize the reduction of attractants and the use of exclusion and monitoring on surrounding properties as essential, not optional, components of pest management.

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[1] Ehi-Eromosele, C. O., Nwinyi, O. C., & Ajani, O. O. (2013). Integrated Pest Management. In book: *Weed and Pest Control - Conventional and New Challenge*s. DOI: 10.5772/54476

[2] Andrews, Richard V., "Should We Kill The Rats Or Is Biological Control Preferable?" (1977). Transactions of the Nebraska Academy of Sciences and Affiliated Societies, 448.

[3] An article on Humane Solutions' (a Vancouver-based humane and eco-friendly pest control company) blog, pest control companies may overlook these structural access-points in the interest of having to provide continued services to clients. See Joe Abercrombie, "Ultimate guide to home rat control: Eco-friendly & humane" (25 July 2019). <https://humanesolutions.ca/2019/07/25/ultimate-rat-removal-guide/#Lastly_forget_rat_poison>

Unfortunately, these methods are often overlooked by pest control providers whose business models are sustained by recurring poison "treatments", creating a cycle of dependence rather than lasting resolution.

We are encouraged by Toronto's willingness to lead on IPM in Ontario and hopeful that Council will address the shortcomings in the Draft Plan. By modernizing its pest management strategy and correcting these inequities, Toronto can set a precedent for sustainable, just, and effective urban pest control.

The Draft Plan includes subjective language that downplays decades of scientific research and well-documented consequences of rodenticides

Rodenticides (both "first'' and "second generation") are inherently dangerous poisons designed to kill. Animals that ingest these products and/or poisoned prey experience pain and suffering over a period of days or weeks, most often leading to death. During this time, rodents and other primary consumers can continue to feed on the baits, thus accumulating a significant level of rodenticides in their livers before they finally die.[4] Rodent populations that have developed resistance can consume even greater amounts of bait with reduced adverse effects, thereby posing even greater risks to subsequent consumers.[5]

Numerous studies have documented sub-lethal effects[6] of rodenticide exposure in wildlife, including lethargy, shortness of breath, anorexia,[7] bloody diarrhea, changes in behavior, tenderness of the joints and mange,[8] demonstrating that, even at sub-lethal levels, rodenticide products are known to reduce the biological fitness of wildlife (See California Department of Pesticide Regulation, pg. 31). Rodenticides also interfere with reproduction, reduce hunting success, and are associated with an increased likelihood of trauma. For example, even if owls are not directly killed by internal hemorrhaging, those that have ingested rodenticides are more likely to hunt unsuccessfully, become ill, or collide with vehicles or windows.

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[4] Cox, P. and Smith, R.H. 1992. "Rodenticide Ecotoxicology: Pre-Lethal Effects of Anticoagulants on Rat Behaviour." Proc. 15th Veterbr. Pest Conf. (J.E. Borrecco and R.E. Marsh, Eds.) Univ. of Calif., Davis, 165- 170.

[5] Hindmarch, S. and Elliott, J.E. 2018. "Ecological Factors Driving Uptake of Anticoagulant Rodenticides in Predators." In N.W. van den Brink, J.E. Elliott, R.F. Shore, and B.A. Rattner (Eds.), *Anticoagulant Rodenticides and Wildlife* (1st ed., pp. 229-258). Springer.

[6] Salim, Hasber, et al. "Secondary poisoning of captive barn owls, Tyto alba javanica, through feeding with rats poisoned with chlorophacinone and bromadiolone." J Oil Palm Res 26.1 (2014): 62-72 [Salim, Secondary poisoning of barn owls]

[7] Cox & Smith, *supra* note 3.

[8] Serieys, Laurel E.K. et al. 2015. "Anticoagulant rodenticides in urban bobcats: exposure, risk factors and potential effects based on a 16-year study." *Ecotoxicology*, 24(4).

Furthermore, behavioral symptoms[9] of poisoned rodents make them more available for consumption by predators.[10] Rats suffering from rodenticide toxicity have been found to spend more time outside of their dens during all hours of the day.[11] Since rodents will **disperse away from buildings and into surrounding natural habitats, often seeking water to quench thirst symptomatic of rodenticide poisoning, the secondary-exposure** risk for predators and scavengers including family pets is substantial.

Many of Ontario's native and at-risk species face high risks of rodenticide poisoning. In addition to mice and rats, small animals including songbirds, shrews, voles, and other non-target mammals and invertebrates are known to access bait boxes containing these poisons. This direct feeding is contaminating the food-chain and wider ecosystem: coyotes, bobcats, foxes, skunks and other mammalian predators that feed on small animals have been found to have rodenticides in their systems. Owls and other raptors are at a particularly high risk of secondary poisoning because of their dependence on rodents as a food source.

In addition to ecosystemic impacts, rodenticides are known to bioaccumulate and persist in the environment posing human health risks. The American Association of Poison Control Centers receives approximately 10,000 reports of rodenticide exposures in children annually in the U.S, Health Canada deems that representative of the situation in Canada.

Toward Lasting, Humane, and Effective Solutions

Rodenticides are inhumane, pose serious threats to animals including family pets and wildlife species, the environment, and to human health. If rodenticides were an effective solution, businesses, farmers, and municipalities would not have ongoing contracts with pest control companies for indefinite rodenticide application.

To ensure the Rat Response Plan leads to meaningful, long-term outcomes, the City must shift the economic and policy incentives that sustain chemical dependency. By embedding structural exclusion, sanitation, and the elimination of attractants as foundational requirements, not optional tools, and offering incentives, the City can help transition pest control practices toward effective, humane, and ecologically responsible solutions.

[9] Littin, K. E., C. E. O'Connor, C.E. and Eason, C.T. (2000). Comparative Effects of Brodifacoum on Rats and Possums, New Zealand Plant Protection Society
[10] Cox & Smith, *supra* note 3.
[11] Howald, G. R., Mineau, P., Elliott, J. E., & Cheng, K. M. 1999. Brodifacoum poisoning of avian scavengers during rat control on a seabird colony. *Ecotoxicology*, 8(6), 431-447.

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We appreciate your time and attention to this important issue and sincerely hope the materials we have provided here, as well as within our 2022 submission to Council, are of assistance.[12] Please feel free to reach out with questions that arise as you review. We would be pleased to serve as a resource as you consider next steps forward.

Respectfully submitted,

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[12] Rodenticide Free Ontario (RFO) is a DTA campaign driven by citizens dedicated to defending wildlife, pets and people by advancing a province-wide ban on rodenticides.