Dear David Durfee, Patricia Ruddy, and the Esteemed Members of the Committee,

My name is Laura Kiesel and I am writing in follow up to my virtual testimony February 25th in support of H.758, with an emphasis on the need for the state to enact a prohibition on anticoagulant rodenticides.

I am a conservation biologist and natural resource scientist by degree and academic training, as well as a former Vermont resident and alumni of the University of Vermont. I received my Master's degree from the Rubenstein School of the Environment and Natural Resources in 2010. Since then I have worked in conservation advocacy and as an environmental journalist and writer. I have been researching and reporting on the impacts of anticoagulant rodenticides–and particularly Second Generation Anticoagulant Rodenticides, or SGARs–for more than a decade. My 2021 investigative feature on SGARs was short-listed with the David Carr Award for Investigative Reporting. I am not under contract with Princeton University Press to complete a book on the topic, which is forthcoming in early 2026.

Here is a slightly expanded version of the live testimony I offered last week, for your record:

- In 2021, SGARs killed the first bald eagle to hatch in my municipality of Arlington, Massachusetts in a century since DDT had eradicated the species from the state. This eagle was just a fledgling that was still in its parental nest and was known as "C25."

- This was the second eagle to die in the Boston metro area from SGARs that year. The first eagle died on top of her unhatched eggs.

- C25's nest was surrounded by buildings containing dozens of bait stations applied by pest control companies that contained SGARs.

- I regularly witnessed C25's parents bringing her dispatched rats. At one point, I could even see the splattered bait (from disemboweling a rat) on C25's feathers, as included in the slide deck I attached.

- In spring 2022, my town lost nearly an entire family of Great Horned Owls–a mother and two fledglings–to rodenticides. This left a single survivor–the male. Great Horned Owls mate for life, and the surviving widower was distraught. In November 2022, he secured a new mate, but within two weeks, she too fell sick

from SGARs exposure and died en route to a rehab facility. Liver panel testing confirmed lethal levels of the SGAR difethialone.

- These wildlife mortalities led to the town of Arlington becoming the first municipality to pass a public lands ban on SGARs in the state of Massachusetts and to file a petition in the state requesting permission to ban on private properties as well. Since then, dozens of other municipalities have followed suit. Arlington has reported no adverse impacts to their economy.

- Additionally, I am part of a legal petition to the state of Massachusetts to suspend registration of all uses of anticoagulant rodenticides. This petition will have a hearing later this month. We are represented by Harvard University's Animal Law & Policy Clinic.

- There is also state legislation pending in Massachusetts that would ban all uses of Anticoagulant Rodenticides. It has widespread support.

- Arlington has reported no negative impacts from this public lands prohibitions and no notable uptick in rodent sightings, nor have the other communities that have implemented their respected municipal bans on SGARs.

- In early 2023, C25's mother, MK the bald eagle also died in part due to complications of SGARs poisoning when one of her lungs spontaneously hemorrhaged and she aspirated on her own blood.

- In addition to the loss of these eagles, my nonprofit organization, Save Mass Wildlife, helped fund the liver panel testing of 40 dead animals found in the Boston metrowest area over a nine month period between 2024 and 2025.

- Virtually all of these had been exposed to anticoagulants & all but a few tested in the lethal range of exposure and exhibited severe internal or external bleeding.

- The animals impacted by lethal levels in the dataset included Red-tailed hawks and barred owls, but also Cooper's Hawks, Great Horned Owls, an Eastern Screech Owl, a fledgling Saw-whet owl, several skunks, a rare gray fox, an adult Eastern coyote, a coyote puppy, an Eastern chipmunk, an Eastern Gray Squirrel, a Great Blue Heron, and a snapping turtle.

- While not in lethal range, exposure levels were also confirmed in a songbird (a grackle) and a shrew, showing how widespread these poisons can be.

- Like DDT, anticoagulants bioaccumulate in the bodies of both prey and predator and biomagnify, pervasively infiltrating the wild food web.

- Biomagnification means these poisons concentrate in higher volumes as they move up the food chain, so it's not an equivalent exposure from prey to predator, but becomes more severe as it's passed along to the predator.

- These poisons primarily kill predator species by secondary exposure–the rodent IS the poison source. The whole purpose of a bait station is the rodent can enter it, consume the bait, and then exit it to the outdoor environment, where it is then often caught and eaten by a predator.

- As such, ***there is no appropriate way*** to apply these poisons that can or will eliminate or meaningfully reduce secondary exposure.

- Whether placed by a general consumer or a pest control company, anticoagulant rodenticides will continue to kill wildlife as long as they are in present and in use.

- Available data from the marketing research marketing firm Grand View Research–indicates that the largest global purchaser and user of ARs is the pest control sector–while private households are the smallest share of users. Agriculture is the second larger user/applicator of these rat poisons after pest control companies.

- A 2017 survey conducted by Tufts University of 35 pest control professionals (PCPs) in Massachusetts suggests ignorance of the adverse impacts of the rodenticide may be fairly common in the industry. The PCPs overwhelmingly indicated "a low level of awareness regarding SGAR potency." All of the survey participants claimed to practice Integrated Pest Management (IPM) and referred to themselves as IPM professionals. Yet nearly all of these same respondents not only used SGARs, but cited it as their preferred and most frequently used rodent control method (particularly the product Contrac Blox, which contains the SGAR Bromadiolone).

- The increase of PCP usage of SGARs has led to a problem of ubiquitous exposure in raptors in the New England region. For instance, a Tufts Wildlife Clinic study found that 96% of the Massachusetts raptors they tested were exposed to ARs in 2017–up 10% from only 5-6 years before–while 100% of Red-tailed hawks were exposed. Additionally, Tufts found that in 2015–the same

year the EPA changed its policies to pull SGARs products from store shelves, pest control companies increased their use of 3 out of the 4 US registered SGARs by 50% each.

- As a conservation biologist by degree and academic training whose research focus for a time was “predator-prey dynamics,” I can tell you that decimating predators often actually increases the numbers of prey by inciting what is known as a “top-down trophic cascade.”

- Many rats and mice are often biologically resistant to these anticoagulants (similar to antibiotic resistance in humans), but their predators are not. This means some mice and rats can eat the bait for prolonged periods, or sometimes even indefinitely, and not be affected. The whole reason we even have SGARs, or second generation ARs, is because rodents developed such robust resistance to the impacts of the first generation ARs, or FGARs.

- One Great Horned Owl can kill and consume over 4,000 mice and well over 1,000 rats every year. If such an owl dies by secondary poisoning, that means many of those rats the owl would have eaten live on to reproduce and create more rats. And the more ARs are used the more resistant rats become to poisons.

- Conversely, fostering and encouraging the presence of predators in a poison-free habitat can contribute to successful rodent management.

- This isn’t just a theory. A study out of Ventura California compared two sites: one that used anticoagulant rodenticides and one that did not use poisons at all but instead installed nest boxes and perches to encourage the presence of hawks and owls found the latter site experienced significantly superior rodent control.

- By contrast, there is not a single study that shows these poisons have at all reduced rats in contiguous landscapes or the diseases associated with them.

- While rats and mice do pose some valid public health threats, these threats are often over-blown by the pest control industry who have a profit motive in promoting this narrative. But here is the reality: Plague is virtually non-existent in New England, with only between 2-7 cases of plague in the entire country a year and they are relegated to Western states. The disease source is even usually rats but other non-commensal rodents like prairie dogs. Hantavirus is also extremely rare in our region.

- What data exists shows that rat populations have only risen with the increase in the use of SGARs and rats exposed are more instead of less likely to have and transmit certain diseases. One study found rats with SGARs in their system were more likely to have and spread Leptospirosis.

- The rat-related diseases that actually pose more valid threats to people like Salmonella and E.coli are best prevented by exercising improved sanitation and waste management. Both Salmonella and E.coli can be killed with disinfectant and heat (boiling or cooking food). But rat poisons cannot easily be dissipated and accidental human exposure is more likely when these poisons are used in proximity to kitchen and food.

- Additionally, exclusion–ensuring rodents are not getting inside a restaurant or home by identifying and sealing off entry-points–is more effective than poisoning and will offer more protection against accidental poisonings of pets and people (including children).

- The Canadian province of British Columbia enacted an 18-month moratorium on SGARs in 2020. It was so successful, BC permanently adopted the ban in 2022, noting no negative net impacts on the economy.

- Actual public records from California show that the state has experienced a ten-year low in rat sightings subsequent to the implementation of its moratorium on first and second generation anticoagulants (see attached slide).

- The country's leading rodent control expert Bobby Corrigan, has stated SGARs are the "DDT of our generation" and need to be banned across the board.

- Meanwhile, First Generation ARs such as diphacinone have been linked to immune system problems in fur-bearing mammals, leading to outbreaks of fatal mange that have plummeted certain populations of bobcats over in California; and can adversely impact the thermoregulation of raptors.

- Despite the fact that SGARs were poisoning thousands to tens of thousands of children annually in the US for many years, EPA did not consider pulling SGARs from most consumer stores until they were sued by environmental justice organizations.

- The same industries that are lobbying against a meaningful prohibition on anticoagulants are those that spent the equivalent of $1.4 million dollars smearing Rachel Carson back in the 1960s and attempting to discredit *Silent Spring*–using many of the identical arguments being used today (that pests are vermin that will “take over” if we take these poisons off the table; it didn’t happen then, it will not happen now). Let’s not make the same mistakes again and be on the right side of history this time.

Thank you for taking my testimony. I appreciate the opportunity and for your consideration of this bill and am glad to answer any questions.

Sincerely,

Laura Kiesel