

March 27, 2026

VIA Colorado General Assembly Public Testimony Submission Form

Re: *Testimony in Support of SB26-062: Rodenticide Use Restrictions*

Dear Chair and members of the House Agriculture, Water & Natural Resources Committee,

My name is Liz Holland, and I write to you on behalf of Friends of Animals and our Colorado members. I respectfully submit these comments in strong support of SB 26-062.

This bill presents Colorado with a critical opportunity to prevent widespread harm caused by second-generation anticoagulant rodenticides (SGARs), specifically brodifacoum, bromadiolone, difenacoum, and difethialone, by restricting their use to certified applicators and only under verified public health emergencies.

The record already before the Committee well establishes that these poisons persist in the environment, cause devastating secondary poisoning in non-target wildlife, and harm thousands of pets and children. The question before the Committee is not whether SGARs pose risks, but whether Colorado will regulate accordingly.

Integrated Pest Management & Fertility Control: Sustainable, Humane & Effective

Rodent fertility control directly targets reproduction, preventing the rebound population surges that follow extermination campaigns. Paired with Integrated Pest Management (IPM) methods such as exclusion and sealing entries, fertility-based approaches offer a nonlethal, sustainable, ecologically responsible alternative to lethal SGARs. **Successful examples are already underway:**

- **Good Bites** – Developed by Dr. Loretta Mayer and WISDOM Good Works, this all-natural, plant-based bait renders male and female rodents infertile without harming non-target wildlife, pets, or humans. Field tests in urban and rural settings, including Fairfield, CT, as well as in California, Utah, and Arizona, demonstrate dramatic population reductions. In one urban neighborhood, the rat population dropped from over 600 to 350 within months, with long-term projections showing up to 98% reduction with sustained use.¹

¹ Mayer et al., *Real-time Monitoring of Contraceptive Pellet Consumption to Achieve Rat/Mouse Rodent Control* (2024), University of California Agriculture & Natural Resources, Proceedings of the Vertebrate Pest Conference Volume 31, <https://escholarship.org/uc/item/1gk7p365>; see also WISDOM Good Works, *Restoring Ecological Balance, One Good Bite at a Time* (2023), <https://wisdomgoodworks.org/2023/12/restoring-ecological-balance-one-goodbite-at-a-time/>.

- **ContraPest** – An EPA-registered liquid bait developed by SenesTech, Inc., ContraPest blocks reproduction in both sexes. Integrated into IPM programs across the U.S., it has achieved population reductions of up to 95% in urban and commercial settings, without triggering the dangerous population rebound common with lethal control.²

Economic and Public Health Benefits

Unrestricted SGAR use imposes significant avoidable costs on wildlife rehabilitation, veterinary care, public health, and municipal pest control. SB26-062 reduces these expenses while preserving predators that naturally manage rodents. Restrictions can prevent devastating events, save families \$2,000–\$7,500 per case, prevent child exposures, and lower wildlife admissions, all without major crop losses under IPM.

Colorado Can Lead

California’s SGAR restrictions illustrate both the risks of continued poison reliance and the feasibility of non-lethal management. While the state’s policies remain under ongoing progress since taking effect in 2021, the record is clear: SGARs harm and reduce predator populations, leaving communities exposed. California’s restrictions on SGARs and acreage signal Colorado can have similar success and that IPM is feasible for safe crop production. By comparison: California lands comprise 24.5M farmland acres, while Colorado lands include 31.8M farmland acres.

A Moral, Environmental, and Practical Imperative

SB26-062 protects Colorado’s communities, wildlife, and ecosystems. Fertility control, integrated into IPM, is a proven, ethical alternative to SGARs. Every day of delay means more preventable deaths and harm. This bill affirms one health: recognizing animals, ecosystems, and people thrive together. I urge the Committee to **Vote YES** on SB26-062 and end the poisoning of Colorado’s wildlife, pets, and communities.

Sincerely,

/s/Liz Holland

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² SenesTech, Inc., *ContraPest Success Stories Reported at Vertebrate Pest Conference* (Feb. 28, 2023), <https://senestech.investorroom.com/2023-02-28-ContraPest-R-Success-Stories-Reported-at-Vertebrate-Pest-Conference>



Animal Welfare Institute

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Testimony in Support

Senate Bill 26-062—Concerning Designating Second-Generation Anticoagulant Rodenticides as Restricted-Use Pesticides for the Purpose of Retail Sales in the State

Before the Colorado House Agriculture, Water and Natural Resources Committee

March 26, 2026

Dear Chair McCormick, Vice Chair Mauro, and the honorable members of the House Agriculture, Water and Natural Resources Committee:

The Animal Welfare Institute, on behalf of our members in Colorado, strongly supports Senate Bill (“SB”) 26-062, concerning designating second-generation anticoagulant rodenticides as restricted-use pesticides for the purpose of retail sales in the state. These rodenticides pose a danger to people, companion animals, and many of Colorado’s native wildlife species. We respectfully request that you vote in favor of this legislation and pass the bill out of committee.

The Animal Welfare Institute is dedicated to alleviating animal suffering caused by people. We seek to improve the welfare of animals everywhere: in agriculture, in commerce, in our homes and communities, in research, and in the wild. Since 1951, AWI has advanced its mission through strategically crafted policy and legal advocacy, educational programs, research and analysis, litigation, and engagement with policymakers, scientists, industry, educators, other NGOs, the media, and the public. We seek scientifically grounded protections for animals in all settings and robust enforcement of those protections.

SB 26-062 designates second generation anticoagulant rodenticides (“SGARs”) as restricted-use pesticides. The bill authorizes the commissioner of agriculture to adopt rules that restrict the use of SGARs to licensed applicators, promote the use of integrated pest management strategies, and encourage structure-associated use of SGARs. This legislation is a crucial step for Colorado to address the inhumaneness of SGARs, which can cause a painful and prolonged death, and to mitigate the risks these poisons present to humans, companion animals, and non-target wildlife, while recognizing that effective, humane, and safer nonlethal alternatives are readily available to manage rodent populations.

I. Death from SGARs can be Painful and Prolonged.

Rodenticides are designed to kill small mammals such as rats, mice, gophers, and ground squirrels. SGARs induce death by stopping the liver from recycling vitamin K to make blood

clotting enzymes.¹ This causes uncontrolled hemorrhaging throughout the body and eventual mortality.² During the time before death, poisoned animals may experience blood in the urine and feces, labored breathing, weakness, shock, and immobility.³ Due to the metabolic processes involved in vitamin K recycling and blood clotting, there is a lag time between ingestion of the poison and death.⁴ SGARs, which include brodifacoum, bromadiolone, difethialone, and difenacoum, are single-dose anticoagulants that can deliver a lethal level of toxin in one feeding, with death resulting five to seven days later.⁵ All vertebrate species are susceptible to compromised health or death from ingesting anticoagulants.⁶ Symptoms of anticoagulant ingestion largely involve bleeding, which can manifest as blood in the urine, nosebleeds, intestinal bleeding, bruising, or hematoma, while abdominal pain, leg pain, headache, labored breathing, weakness, shock, and immobility can also occur.⁷

II. SGARs Endanger People, Pets, and Wildlife.

Rodents play important ecological roles. However, human food attracts rodents and other small mammals to communities and farms where they can cause damage to infrastructure, eat crops, and transmit diseases.⁸ Exterminating rodents with SGARs, however, is not only deadly to the rodents but also hazardous to humans, particularly children, companion animals, and non-target wildlife. SB 26-062 would help to reduce this risk.

¹ Masuda, B. M. et al. (2015). Residue profiles of brodifacoum in coastal marine species following an island rodent eradication. *Ecotoxicology and Environmental Safety*, 113(1), 1. Available at: <http://dx.doi.org/10.1016/j.ecoenv.2014.11.013>.

² *Id.*; Rattner, B. A. et al. (2014). Adverse outcome pathway and risks of anticoagulant rodenticides to predatory wildlife. *Environmental Science & Technology*, 48(15), 8433-8445. Available at: <https://pubs.acs.org/doi/abs/10.1021/es501740n>.

³ Rattner, B. A. and Mastrotta, F. N. (2018). Anticoagulant rodenticide toxicity to non-target wildlife under controlled exposure conditions. USDA National Wildlife Research Center - Staff Publications. 2103. Available at: https://link.springer.com/chapter/10.1007/978-3-319-64377-9_3.

⁴ California Department of Pesticide Regulation. (2013). Memorandum: Second Generation Anticoagulant Rodenticide Assessment.

⁵ U.S. Environmental Protection Agency. (2008). Risk Mitigation Decision for Ten Rodenticides. Available at <https://www.regulations.gov/document?D=EPA-HQ-OPP-2006-0955-0764>.

⁶ Regnery, J. et al. (2019). Rating the risks of anticoagulant rodenticides in the aquatic environment: a review. *Environmental Chemistry Letters*, 17(1), 215-240. Available at: <https://link.springer.com/article/10.1007/s10311-018-0788-6>.

⁷ Tran, M. H., & King, N. C. (2015). Epidemiology and symptomatology of long acting anticoagulant rodenticide poisoning. *Journal of Epidemiological Research*, 2(2), 1; Rattner, B. A. and Mastrotta, F. N. (2018). Anticoagulant rodenticide toxicity to non-target wildlife under controlled exposure conditions. USDA National Wildlife Research Center - Staff Publications. 2103. Available at: https://link.springer.com/chapter/10.1007/978-3-319-64377-9_3.

⁸ U.S. Environmental Protection Agency. (2004). Office of Prevention, Pesticides, and Toxic Substances. Analysis of Rodent Bait Use. U.S. Government Printing Office. Available at: <https://downloads.regulations.gov/EPA-HQ-OPP-2004-0033-0007/content.pdf>.

A. Dangers to People

The National Poison Data System[®] documented 8,916 human rodenticide poisoning cases reported in 2024 to regional poison centers in the United States.⁹ SGARs made up over 33 percent of that total.¹⁰ Oral ingestion accounts for the majority of exposures, but inhalation, such as by rodenticide factory workers and skin contact and penetration, are additional routes of exposure.¹¹ Young children are at the greatest risk of accidentally ingesting rodenticides.¹² Most adult poisonings are by those attempting suicide.¹³ Homicides, domestic abuse, and drug lacing also account for some human cases of rodenticide poisoning.¹⁴ Few cases of human exposure are lethal, but rodenticide exposure can induce illness.

B. Dangers to Companion Animals

In Colorado, 2,125 pets were exposed to toxic rodenticides from 2020–2024.¹⁵ All rodenticides slated to be designated restricted or limited use by SB 26-062 pose a danger to companion animals. Companion animals are at risk of accidental poisoning through direct exposure to rodenticides, such as by eating toxic bait, or through secondary poisoning if they eat poisoned rodents.¹⁶ According to annual reports conducted by the American Society for Prevention of Animal Cruelty (“ASPCA”), the ingestion of rodenticides is consistently among the 10 most common types of poisoning in domestic dogs and cats.¹⁷ Poisoning of domestic animals by SGARs is, unfortunately, a common occurrence.¹⁸

⁹ Beuhler, M. C. et al. (2025). 2024 Annual report of the National Poison Data System®(NPDS) from America’s Poison Centers®: 42nd annual report. *Clinical Toxicology*, 63(12), 1029-1280. Available at: <https://www.tandfonline.com/doi/abs/10.1080/15563650.2025.2571299>.

¹⁰ *Id.*

¹¹ Tran, M. H., & King, N. C. (2015). Epidemiology and symptomatology of long acting anticoagulant rodenticide poisoning. *Journal of Epidemiological Research*, 2(2), 1.

¹² Isackson, B., & Irizarry, L. (2024). Rodenticide toxicity. In StatPearls [Internet]. StatPearls Publishing. Available at: <https://www.ncbi.nlm.nih.gov/sites/books/NBK554428/>.

¹³ *Id.*

¹⁴ Tran, M. H., & King, N. C. (2015). Epidemiology and symptomatology of long acting anticoagulant rodenticide poisoning. *Journal of Epidemiological Research*, 2(2), 1.

¹⁵ American Society for the Prevention of Cruelty to Animals. (2025). pers. comm. Data on pet exposures to rodenticides in Colorado.

¹⁶ Gupta, R. C. (2018). Non-anticoagulant rodenticides. *Veterinary Toxicology*, 3rd Edition. Elsevier, Inc. pgs. 613-626.

¹⁷ McLean, M. K. & Hansen, S. R. (2012). An overview of trends in animal poisoning cases in the United States: 2002–2010. *Veterinary Clinics: Small Animal Practice*, 42(2), 219-228. Available at:

[https://www.vetsmall.theclinics.com/article/S0195-5616\(11\)00225-7/abstract](https://www.vetsmall.theclinics.com/article/S0195-5616(11)00225-7/abstract); Means, C. & Wismer, T. (2018). An overview of trends in animal poisoning cases in the United States: 2011 to 2017. *The Veterinary Clinics of North America. Small Animal Practice*, 48(6), 899-907.

¹⁸ Stroope, S. et al. (2022). Retrospective evaluation of clinical bleeding in dogs with anticoagulant rodenticide toxicity—a multi-center evaluation of 62 cases (2010–2020). *Frontiers in Veterinary Science*, 9, 879179. Available at: <https://www.frontiersin.org/journals/veterinary-science/articles/10.3389/fvets.2022.879179/full>.

C. Dangers to Wildlife

Rodenticides pose a significant threat to non-target wildlife, including birds of prey, carnivores, trout and other fish, and small mammals. In the last two decades, scientists from around the world have detected rodenticides in the bodies of non-target wild animals that consume the poisons directly, scavenge or prey on animals that ingested rodenticides, or use aquatic habitats tainted with rodenticides.¹⁹

In a study on urban coyotes conducted in the Denver metro area in 2013, 100 percent of coyotes tested positive for brodifacoum, a second generation anticoagulant.²⁰ Scientists have detected rodenticide exposure in predatory mammals from across the country.²¹ One study conducted in Washington tested the livers of 24 dead mountain lions and 4 dead bobcats.²² Nearly 70 percent of the animals tested had at least one anticoagulant poison in their livers.²³ The researchers collected the carcasses opportunistically; they were the victims of lethal removal due to conflicts, harvest, vehicle collisions, and other causes.²⁴ The U.S. Fish and Wildlife Service has also documented rodenticide poisoning in pacific martens in California and Oregon.²⁵ A study conducted in Vermont and New Hampshire found 97 percent of the fishers tested had traces of rodenticides in their livers.²⁶ In Pennsylvania, Facka et al. (2024) found that close to 45 percent of the 265 combined bobcat, fisher, and river otter carcasses tested were positive for anticoagulant poisons.²⁷ This study was the first to detect anticoagulant rodenticide exposure in river otters, which are aquatic mammals.

Studies on aquatic environments and fish, including trout, as well as the predators that feed on fish, show that rodenticides can have negative effects.²⁸ For example, anticoagulant

¹⁹ *Id.*

²⁰ Poessel, S. A. et al. (2015). Anticoagulant rodenticide exposure and toxicosis in coyotes (*Canis latrans*) in the Denver metropolitan area. *The Journal of Wildlife Diseases*, 51(1), 265-268. Available at: <https://jwd.kglmeridian.com/view/journals/jwdi/51/1/article-p265.xml?isSearch=true>.

²¹ Cunningham, S. A. (2025). Spatiotemporal drivers of rodenticide exposure in a mammalian forest carnivore. *Science of the Total Environment*, 982, 179605. Available at: <https://www.sciencedirect.com/science/article/pii/S004896972501246X>.

²² Yovovich, V. et al. (2024). Wild felid anticoagulant rodenticide exposure in Washington. *Canadian Wildlife Biology & Management*, 13(2). Available at: <https://cwbm.ca/wp-content/uploads/2024/12/8.-Yovovich-et-al.pdf>.

²³ *Id.*

²⁴ *Id.*

²⁵ U.S. Fish and Wildlife Service. (2025). Coastal Oregon and Northern Coastal California Populations of the Pacific Marten (*Martes caurina*) Species Report 54. Available at: [https://www.fws.gov/oregonfwo/ExternalAffairs/News/2015/Coastal_Marten_Final_Species_Report_April_2015%20\(1\).pdf](https://www.fws.gov/oregonfwo/ExternalAffairs/News/2015/Coastal_Marten_Final_Species_Report_April_2015%20(1).pdf).

²⁶ Buckley, J. Y. et al. (2023). High prevalence of anticoagulant rodenticide exposure in New England Fishers (*Pekania pennanti*). *Environmental Monitoring and Assessment*, 195(11), 1348. Available at: <https://link.springer.com/article/10.1007/s10661-023-11919-x>.

²⁷ Facka, A. et al. (2023). Spatial patterns of anticoagulant rodenticides in three species of medium-sized carnivorans in Pennsylvania. *Canadian Journal of Zoology*, 102(5), 443-454. Available at: <https://cdsciencepub.com/doi/full/10.1139/cjz-2023-0131>.

²⁸ Regnery, J. et al. (2020). Heavy rainfall provokes anticoagulant rodenticides' release from baited sewer systems and outdoor surfaces into receiving streams. *Science of the Total Environment*, 740, 139905.

rodenticides have been found to cause anemia, hemorrhaging, and mortality under laboratory conditions in rainbow trout, which the researchers determined to be particularly sensitive to these types of poisons.²⁹

Researchers examined a range of studies on the presence of anticoagulant rodenticides in surface water, stormwater runoff, groundwater, wastewater treatment plants, soils and sediments, suspended particulate matter, and aquatic organisms, as well as avian and mammalian predators in the aquatic food web. This review led them to conclude: “[a]nticoagulants entering the aquatic environment and accumulating in aquatic wildlife are likely to be transferred in the food chain, causing potentially serious consequences for the health of wildlife and humans alike.”³⁰ Pesticides may impair the swimming performance in salmon, and as the temperatures of waterways rise this will likely exacerbate impacts, further decreasing the swimming ability of fish.³¹ In a laboratory study, researchers from Washington State University found coho salmon to be at risk of hemorrhaging and death from low levels of ingested anticoagulant rodenticides.³² Brodifacoum, an SGAR, was found to impair development and decrease survival of coho salmon embryos under laboratory conditions.³³

Fish are an important food source for bald eagles, and scientists have found rodenticides in bald and golden eagles³⁴ as well as other birds of prey. For example, researchers studying northern spotted owls found 10 dead owls during the course of the study, and seven tested

Available at: <https://www.sciencedirect.com/science/article/pii/S0048969720334252>; Regnery, J. et al. (2024). Rodenticide contamination of cormorants and mergansers feeding on wild fish. *Environmental Chemistry Letters*, 22(6), 2611-2617. Available at: <https://link.springer.com/article/10.1007/s10311-024-01762-y>; Regnery, J. et al. (2024). First evidence of widespread anticoagulant rodenticide exposure of the Eurasian otter (*Lutra lutra*) in Germany. *Science of the Total Environment*, 907, 167938. Available at: <https://www.sciencedirect.com/science/article/pii/S0048969723065658>.

²⁹ Schmiege, H. et al. (2025). Brodifacoum causes coagulopathy, hemorrhages, and mortality in rainbow trout (*Oncorhynchus mykiss*) at environmentally relevant hepatic residue concentrations. *Ecotoxicology and Environmental Safety*, 289, 117629. Available at: <https://www.sciencedirect.com/science/article/pii/S0147651324017056>.

³⁰ Regnery, J. et al. (2019). Rating the risks of anticoagulant rodenticides in the aquatic environment: a review. *Environmental Chemistry Letters*, 17(1), 215-240, at 4. Available at: <https://link.springer.com/article/10.1007/s10311-018-0788-6>.

³¹ Fuller, N. et al. (2022). Dietary exposure to environmentally relevant pesticide mixtures impairs swimming performance and lipid homeostatic gene expression in juvenile Chinook salmon at elevated water temperatures. *Environmental Pollution*, 314, 120308. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0269749122015226>.

³² Pavord, L. (2025). Impact of Anticoagulant Rodenticides on Juvenile Coho Salmon (*Oncorhynchus kisutch*): Assessing Lethal & Sublethal Effects (Master’s thesis, Washington State University); Pavord, L. et al. (2025). Toxicity of anticoagulant rodenticides on Pacific salmon: assessing lethal & sublethal effects. Available at SSRN 5473354.

³³ Driessnack, M. et al. (2025, November). Evaluating the Effects of Anticoagulant-Containing Bait Pellets to Early Life Stage Pacific Salmon. In SETAC North America 46th Annual Meeting. SETAC.

³⁴ Bodenstern, B. L. et al. (2023). *Haliaeetus leucocephalus* (bald eagle) and *Aquila chrysaetos* (golden eagle) mortality and exposure to lead, mercury, and anticoagulant rodenticides in eight western and midwestern states, 2014–17 (No. 2023-1016). U.S. Geological Survey.

positive for anticoagulant rodenticides.³⁵ Golden eagles, similar to other avian predators, are particularly sensitive to anticoagulant rodenticides and may be exposed to these products because they commonly consume rodents and other animals that may have been poisoned by rodenticides.³⁶ SGARs have also been documented in burrowing owls,³⁷ as well as red-tailed hawks, barred owls, eastern screech-owls, and great horned owls.³⁸ In one study, 96 percent of all birds of prey tested were positive for SGARs.³⁹

1. Risks of Rodenticides to Rodents and Small Mammals

Rodenticides also pose a risk to native small mammals, which are facing declining populations across the United States and Canada.⁴⁰ Scientists recently found that over 90 percent of the 66 small mammal species they studied are declining, the majority of which are native rodents.⁴¹ Rodenticide use is likely a factor contributing to this decline.⁴² As small mammals, these species are at risk of consuming toxic rodenticides intended for target rodents such as the house mouse or Norway rat.

2. Risks to Colorado Species of Greatest Conservation Need

The findings outlined above have concerning implications for Colorado's Species of Greatest Conservation Need ("SGCN"), which are species identified in Colorado's State Wildlife Action Plan as species "that most urgently need conservation action."⁴³ Below is a list of Colorado SGCN that are at risk of primary and/or secondary poisoning from rodenticides.

³⁵ Gabriel, M. W. et al. (2018). Exposure to rodenticides in northern spotted and barred owls on remote forest lands in northwestern California: evidence of food web contamination. *Avian Conservation & Ecology*, 13(1).

³⁶ Herring, G. et al. (2017). Characterizing golden eagle risk to lead and anticoagulant rodenticide exposure: a review. *Journal of Raptor Research*, 51(3), 273-292. Available at: <https://bioone.org/journals/Journal-of-Raptor-Research/volume-51/issue-3/JRR-16-19.1/Characterizing-Golden-Eagle-Risk-to-Lead-and-Anticoagulant-Rodenticide-Exposure/10.3356/JRR-16-19.1.full>.

³⁷ Justice-Allen, A. & Loyd, K. A. (2017). Mortality of western burrowing owls (*Athene cunicularia hypugaea*) associated with brodifacoum exposure. *The Journal of Wildlife Diseases*, 53(1), 165-169. Available at: <http://www.jwildlifedis.org/doi/full/10.7589/2015-12-321>.

³⁸ Murray, M. (2017). Anticoagulant rodenticide exposure and toxicosis in four species of birds of prey in Massachusetts, USA, 2012–2016, in relation to use of rodenticides by pest management professionals. *Ecotoxicology*, 26(8), 1041-1050. Available at: <https://link.springer.com/article/10.1007/s10646-017-1832-1>; Gomez, E. A., Prestridge, H. L., & Smith, J. A. (2023). Anthropogenic threats to owls: Insights from rehabilitation admittance data and rodenticide screening in Texas. *PLoS One*, 18(8), e0289228. Available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0289228>.

³⁹ *Id.* at 1041.

⁴⁰ Medd, A. et al. (2025). Continental declines in North American small mammal populations. *Biological Conservation*, 306, 111109. Available at: <https://www.sciencedirect.com/science/article/pii/S0006320725001466>.

⁴¹ *Id.*

⁴² *Id.*

⁴³ Criteria for identifying vertebrate SGCN include: "Endangered Species Act status;" "urgency of action: abundance, distribution, trend vulnerability;" "Colorado's contribution to the species overall conservation;" "lack of scientific knowledge;" and "threats likely to increase in scope and severity." From Colorado Parks and Wildlife. (2025). 2025 Colorado State Wildlife Action Plan: What's Changed Since

Species of Greatest Conservation Need⁴⁴ at Risk of Secondary Poisoning

Birds of Prey

American Goshawk (*Astur atricapillus*)
American Kestrel (*Falco sparverius*)
American Peregrine Falcon (*Falco peregrinus anatum*)
Burrowing Owl (*Athene cunicularia*)
Golden Eagle (*Aquila chrysaetos*)
Mexican Spotted Owl (*Strix occidentalis lucida*)
Northern Harrier (*Circus hudsonius*)
Prairie Falcon (*Falco mexicanus*)

Mammalian Carnivores

Black-footed Ferret (*Mustela nigripes*)
Canada Lynx (*Lynx canadensis*)
Gray Wolf (*Canis lupus*)
Plains Spotted Skunk (*Spilogale interrupta*)
Wolverine (*Gulo gulo*)

Fish

Arkansas Darter (*Etheostoma cragini*)
Bluehead Sucker (*Pantosteus discobolus*)
Bonytail (*Gila elegans*)
Brassy Minnow (*Hybognathus hankinsoni*)
Colorado Pikeminnow (*Ptychocheilus lucius*)
Colorado River Cutthroat Trout (*Oncorhynchus clarkii pleuriticus*)
Common Shiner (*Luxilus cornutus*)
Eagle River Sculpin (*Cottus annae*)
Flannelmouth Sucker (*Catostomus latipinnis*)
Flathead Chub (*Platygobio gracilis*)
Greenback Cutthroat Trout (*Oncorhynchus clarkii stomias*)
Humpback Chub (*Gila cypha*)
Lake Chub (*Couesius plumbeus*)
Mountain Whitefish (*Prosopium williamsoni*)
Northern Redbelly Dace (*Chrosomus eos*)
Orangespotted Sunfish (*Lepomis humilis*)
Orangethroat Darter (*Etheostoma spectabile*)
Plains Minnow (*Hybognathus placitus*)
Plains Topminnow (*Fundulus sciadicus*)

2015?. Website (storymap). Available at:

<https://storymaps.arcgis.com/stories/dd2c3b8bba544db487d9ca7c6c59e9fe>.

⁴⁴ Colorado Parks and Wildlife. (2025). State Wildlife Action Plan.

Razorback Sucker (*Xyrauchen texanus*)
Rio Grande Chub (*Gila pandora*)
Rio Grande Cutthroat Trout (*Oncorhynchus clarkii virginalis*)
Rio Grande Sucker (*Pantosteus plebeius*)
Roundtail Chub (*Gila robusta*)
Southern Redbelly Dace (*Chrosomus erythrogaster*)
Stonecat (*Noturus flavus*)
Suckermouth Minnow (*Phenacobius mirabilis*)

Rodents

Black-tailed Prairie Dog (*Cynomys ludovicianus*)
Gunnison's Prairie Dog (*Cynomys gunnisoni*)
New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*)
Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)
White-tailed Prairie Dog (*Cynomys leucurus*)

III. Nonlethal Alternatives Provide a More Effective and Longer-term Solution to Rodent Population Management.

Nonlethal rodent management techniques provide safe, effective, humane, and long-term solutions to human-rodent conflicts. Attempting to manage rodent populations using SGARs does nothing to permanently fix the underlying causes of rodent problems, and poisoning may exacerbate unwanted rodent situations and lead to other concerns, including risks to human, pet, and wildlife health.⁴⁵ Without addressing the root cause of the conflict—access to food and shelter—rodents will likely return to previously poisoned areas. Moreover, rodents can become “bait shy” and will not feed on poisoned bait, and some experts believe repeated poisonings in the same area can lead to genetic resistance to the toxicant.⁴⁶ Additionally, as stated by Stuart et al. (2025):

Some studies have also revealed increased pathogen prevalence/transmission in surviving animals following efforts that focused on lethal control, such as with leptospirosis in rats, and killing rats in endemic plague foci could lead to the dispersal of rat flea vectors.⁴⁷

⁴⁵ Stuart, A. M. et al. (2025). Alternative domestic rodent pest management approaches to address the hazardous use of metal phosphides in low-and middle-income countries. *Journal of Pest Science*, 98(1), 89-111. Available at: <https://link.springer.com/article/10.1007/s10340-024-01825-7>.

⁴⁶ *Id*; Witmer, G. W. (2019). The changing role of rodenticides and their alternatives in the management of commensal rodents. *Human-Wildlife Interactions*, 13(2), 186-199.

⁴⁷ Stuart, A. M. et al. (2025). Alternative domestic rodent pest management approaches to address the hazardous use of metal phosphides in low-and middle-income countries. *Journal of Pest Science*, 98(1), 89-111, at 98, Available at: <https://link.springer.com/article/10.1007/s10340-024-01825-7>, citing Lee, M. J. et al. (2022). Reconsidering the “war on rats”: what we know from over a century of research into municipal rat management. *Frontiers in Ecology and Evolution*, 10, 813600; Belmain, S. et al. (2018). A new rat control strategy for Madagascar to prevent plague outbreaks. Natural Resources Institute, University of Greenwich; Rahelinirina, S. M. et al. (2023). Assessing the effectiveness of intervention to prevent plague through community and animal-based survey. *PLOS Global Public Health*, 3(12),

Therefore, Colorado residents and businesses will likely be motivated to implement, and will benefit from implementing, strategies that incorporate nonlethal alternatives to warding off rodents.

Effective nonlethal alternatives include habitat modification, certain types of biocontrol, and fertility control. Habitat modification, which includes sanitation and exclusion measures, is achieved by removing food and potential shelter to make areas less favorable to rodents.⁴⁸ The following simple steps are actions that property owners and businesses can take to make potential rodent habitat less desirable for the animals:

- Seal any holes in roofs, basements, crawlspaces, and walls;
- Use wire mesh extending partially into the ground to block off spaces under porches;
- Seal openings around cables, pipes, and wires where they enter your space;
- Never leave pet food out for prolonged periods;
- If you feed birds, only use small amounts of seed at a time, bring in feeders at night, and pick up fallen seed;
- Harvest all food in gardens promptly; and
- Keep garbage cans securely covered.⁴⁹

These methods can be undertaken by residents and business owners directly, as well as by rodent control operators on behalf of their clients.

Another effective method of habitat modification includes the use of biorepellants, which are a non-toxic, environmentally friendly way to protect infrastructure without the use of poisons. Biorepellants rely on strong scents or tastes to make the environment unappealing to rodents. Examples include cayenne powder, certain essential oils, and other botanical extracts. Commercial biorepellants designed to address rodent issues include Fresh Cab,⁵⁰ Rataway,⁵¹ DeTour RoadBlock,⁵² and Pro-Pell.⁵³

Biocontrol methods, which use a target organism's natural predators to suppress and maintain their populations,⁵⁴ have also proven to be very effective at controlling rodent

e0002211. Available at:

<https://journals.plos.org/globalpublichealth/article?id=10.1371/journal.pgph.0002211>.

⁴⁸ Gurr, G. M. et al. (2017). Habitat management to suppress pest populations: progress and prospects. *Annual Review of Entomology*, 62(1), 91-109. Available at:

<https://www.annualreviews.org/content/journals/10.1146/annurev-ento-031616-035050>.

⁴⁹ Mass Audubon, NH Audubon, and Audubon of Rhode Island. Undated. Integrated Pest Management Toolkit. verbatim excerpt. Available at:

https://docs.google.com/document/d/18KNWDVHsqL17F9KAi48I_ZOk4P97uR7zQBhGtGsED7U/edit?usp=sharing.

⁵⁰ Available at: <https://www.earthkind.com/product/fresh-cab-rodent-repellent/>.

⁵¹ Available at: <https://rataway.com/>.

⁵² Available at:

https://www.nixalite.com/SiteContent/Documents/PDFs/DeTourBrochure1.pdf?srsId=AfmBOorvMg3AdmCcJ8ae-17rcPD_hTgxNSw9VfXVKwkg_SoXLOLoApbc.

⁵³ Available at: <https://www.pestmanagementsupply.com/pro-pell-gallon.html>.

⁵⁴ Available at: <https://www.nifa.usda.gov/grants/programs/biological-control-program>.

populations. The most common rodent biocontrol method is attracting birds of prey, such as hawks, owls, and eagles, by installing nesting boxes and perches. While biocontrol will not necessarily remove rodents entirely, this method does help keep rodent populations to manageable levels.⁵⁵

More recently, scientists have been investigating rodent fertility control tools as a humane method of population control.⁵⁶ There are several commercially available rodent fertility control products that have been approved by the U.S. Environmental Protection Agency, including ContraPest and Evolve, which reduce rodent populations by making them temporarily infertile.⁵⁷ Multiple cities, including Chicago, New York City, San Francisco, and Washington, D.C., have piloted rodent fertility control programs.⁵⁸

IV. Conclusion

If enacted, SB 26-062 would be a crucial step toward tackling the tragic problem of non-target poisoning by SGARs. With safer, effective, more humane, alternatives readily available, the risk that they present to humans and wildlife is unacceptable. We therefore respectfully request that you vote in favor of this legislation. If you have any questions or if there is any additional information we can provide, please do not hesitate to contact us.

Sincerely,



Lauren McCain
Senior Policy Advisor
Terrestrial Wildlife Program
Email: lmccain@awionline.org

⁵⁵ Jamil, M. et al. 2024. Advances in vertebrate pest management. *Zoology: Advancements and Research Trends* (Ijaz et al. eds): FahumSci. pp: 305-311. Available at: https://www.researchgate.net/profile/Warda-Mustfa/publication/385278610_Advances_in_Vertebrate_Pest_Management/links/67459e1eb5bd9d17d608897c/Advances-in-Vertebrate-Pest-Management.pdf.

⁵⁶ Hess, R. A. et al. (2024). Male animal sterilization: history, current practices, and potential methods for replacing castration. *Frontiers in Veterinary Science*, 11, 1409386; Chen Charlotte, Y. I. (2024). *Modelling Effects of Fertility Intervention on Population Dynamics of Brown Rat (Rattus norvegicus)*. Thesis, Magingen University.

⁵⁷ Available at: https://senestech.com/?srsltid=AfmBOortimQq5wVtq8BITzkG07cm_aC2R1FWO8qqWrZfOLPZ_i_ObEps; Available at: https://senestech.com/pages/contrapest-liquid?srsltid=AfmBOoqwCk_QQ30ShiL9Rf-vEIN6FcWbmq5yZB0F7jOTA6CwgoHiN9u.

⁵⁸ Available at: <https://phys.org/news/2025-09-based-birth-chicago-rats-deaths.html>; Available at: <https://council.nyc.gov/shaun-abreu/2025/02/12/rat-birth-control-and-rat-walks-among-new-initiatives-to-curb-nycs-rat-population/>; Available at: <https://www.ktvu.com/news/san-francisco-using-contraceptive-to-control-thriving-rat-population>; Available at: <https://senestech.investorroom.com/2020-06-08-Washington-DC-Set-to-Expand-the-Use-of-ContraPest>;

A handwritten signature in black ink, appearing to read "Johanna Hamburger". The signature is written in a cursive style with a large initial "J" and "H".

Johanna Hamburger
Director and Senior Attorney
Terrestrial Wildlife Program
Email: johanna@awionline.org



March 26, 2026

Re: Support for Senate Bill 26-062 - Concerning designating second-generation anticoagulant rodenticides as restricted-use pesticides for the purpose of retail sales in the state

Chairwoman McCormick and Members of the House Agriculture, Water, and Natural Resources Committee - Thank you for the opportunity to provide testimony on Senate Bill 26-062.

On behalf of Rentokil Terminix, the world's largest pest management provider serving communities across Colorado, I am writing to express our strong support for Senate Bill 26-062. This legislation takes a thoughtful and balanced approach to limiting access to higher-risk rodenticides while preserving their availability for use by trained and certified professionals. We commend the sponsors for advancing a policy that strengthens protections for non-target wildlife while maintaining effective rodent control.

Rentokil Terminix proudly supports this legislation. Our mission is simple and guides everything we do: **to protect people, enhance lives, and preserve our planet.** Senate Bill 26-062 advances each of these goals through a science-driven and responsible framework.

This bill designates second-generation anticoagulant rodenticides (SGARs) as restricted-use pesticides, ensuring these important tools remain available, but only in the hands of trained professionals. This is not a ban. It is a stewardship model.

By limiting access to professionals, the bill reduces the risk of accidental exposure to children, pets, and wildlife, while ensuring these tools are used responsibly, precisely, and only when necessary.

This legislation is also fully aligned with federal science and policy. The U.S. Environmental Protection Agency has proposed classifying SGARs as restricted-use pesticides due to risks to non-target wildlife and human health. EPA's scientific assessments confirm that these products can pose acute and chronic risks to mammals and birds, particularly through primary and secondary exposure, reinforcing the need for professional oversight.

At the same time, EPA is clear that rodenticides remain critical public health tools when used as part of an IPM framework, particularly in high-risk environments where non-chemical methods are insufficient.

It is also important to recognize that, under current federal and Colorado law, SGARs are already structured in a way that discourages consumer use. These products are only sold in large 18-pound buckets and priced between \$130 and \$145, reinforcing their role as professional-grade tools rather than consumer products.

At the same time, the consumer market has already shifted toward alternatives such as bromethalin and cholecalciferol, which dominate retail shelves in part due to reduced concerns related to non-target wildlife exposure.

Importantly, this bill will not disrupt rural schools, small businesses, or other entities that perform their own pest control. SGARs are rarely used in these settings today, and nothing in this bill limits their ability to protect public health and property. Effective alternatives will remain readily available.

Colorado is also not alone in taking this step. States such as California, Vermont, Connecticut, and South Carolina have all taken action to restrict SGARs or move them toward professional-only use.

At the same time, proposals in other states go significantly further. In New Hampshire, a Republican-controlled House of Representatives has advanced legislation (HB 1676) that would restrict all rodenticides, allowing only limited acute products in consumer packaging of one pound or less for purchase by members of the general public.

Against that backdrop, Senate Bill 26-062 is a measured and moderate approach. It preserves professional access to effective tools while ensuring that higher-risk products are used responsibly.

Rodents pose serious risks to food safety, housing, public health, and critical infrastructure. Professional pest management plays a vital role in addressing these risks in a targeted and responsible manner.

This bill gets the policy right: it addresses misuse at the source while preserving the tools needed to protect public health.

Senate Bill 26-062 strikes the right balance. It protects people, enhances lives, and preserves the planet while ensuring that effective tools remain available for trained professionals.

Rentokil Terminix is proud to support this legislation and appreciates the sponsors' leadership. Thank you for your consideration.

Sincerely,

Jake Plevelich
Director of Government Affairs
Rentokil Terminix

House Agriculture, Water & Natural Resources

03/30/2026

SB26-062 Rodenticide Use Restrictions

Typed Text of Testimony Submitted

Name, Position, Representing	Typed Text of Testimony
Ingrid Moore For themselves	<p>I urge a YES vote on this bill.</p> <p>The bill protects children, pets and wildlife from dangerous rodenticide poisonings. Data show that children under 5 account for 70% of anticoagulant rodenticide exposures, and studies also show extremely high exposure rates in Colorado wildlife.</p> <p>The bill urges prioritization of safer, science-based integrated pest management approaches (IPM) while still allowing rodenticide use during genuine public health emergencies.</p> <p>Some may be reluctant to try new practices and object to this bill. But IPM can work by using nature as an ally to control pest populations.</p> <p>Please vote to PASS this bill.</p>
Kathleen Gibbs For themselves	<p>I am writing in support of Colorado SB26-062.</p> <p>SGARs often kills or injures non-target animals like family pets, birds and beneficial wildlife. SGAR exposure harms children causing vomiting, seizures, internal bleeding, neurological damage, and death.</p> <p>Coloradoans want to restrict the sale and use of second-generation anticoagulant rodenticides (SGARs) and rodent glue traps to protect people, wildlife and pets.</p> <p>Kathleen Gibbs</p>
Mike Robinette For themselves	<p>Mike Robinette</p> <p>66900 La Plaza Road</p> <p>Montrose, Colorado 81401</p> <p>(520) 576-0871</p>

	<p>March 27, 2026</p> <p>Re: Please Support SB26-062</p> <p>Dear Members of the Agriculture, Water and Natural Resources Committee,</p> <p>My name is Mike Robinette and I am a resident of Montrose, Colorado and HD58. I write to you today to urge your support of SB26-062 (Prohibiting Toxic Rodenticides in Colorado). This bill designates second-generation anticoagulant rodenticides as restricted-use pesticides and authorizes the Commissioner of Agriculture to restrict their distribution and use. Rodenticides are highly toxic chemicals that create prolonged suffering in targeted animals, poisoned pets, children and other wildlife while having an incredibly deleterious effect on our environment. Rodenticides have been proven to harm children who are accidentally exposed to them and are a leading cause of pet poisoning in Colorado. Furthermore, rodenticides bioaccumulate through the food chains of Colorado wildlife poisoning myriad species of animals in various ecosystems. Lastly, the use of rodenticides has been shown to destabilize those ecosystems and worsen rodent problems.</p> <p>Your support of SB26-062 would ensure that the negative impact to the health of our children, our pets, our wildlife, our ecosystems and our environment would be minimized through the prohibition of rodenticides.</p> <p>Thank you so much for your service to Colorado and your support of SB26-062.</p> <p>Warm Regards,</p> <p>Mike Robinette</p>
ReNay Carr For	Dear Sir,

<p>themselves</p>	<p>So grateful to read that there is a possibility to save all children and animals from this poison which for animals is a very slow and horrific death.</p> <p>This should be outlawed in all 50 states!</p> <p>Nature actually supplies animals to keep rats and mice in check.</p> <p>Thank you for the opportunity to give my opinion.</p> <p>Renay Carr</p>
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