Dan Ashe Testimony on SB634.pdf Uploaded by: Daniel Ashe Position: FAV



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March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 - Hunting - Nonlead Ammunition, et al., FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan and Members of the Committee:

My name is Dan Ashe. I am a lifelong hunter, of small game; birds; big game; waterfowl; especially waterfowl. It has been a passion for as long as I can remember. I have lived and hunted, in Maryland, for 43 years.

I am also a lifelong conservationist. Trained as a biologist, I made a professional career in the U.S. Fish and Wildlife Service and was privileged to serve in many capacities, including Chief of the National Wildlife Refuge System (the world's largest system of protected lands and waters), Science Advisor to the Director, Deputy Director, and for nearly six years, as the agency Director (2011-2017). In that latter position, I was nominated by the President and confirmed, unanimously, by the U.S. Senate.

Currently, I am honored to serve as President and CEO of the Association of Zoos and Aquariums, whose accredited members include the Maryland Zoo in Baltimore, and Baltimore's National Aquarium. Each year, AZA-accredited members contribute more than \$300 million in direct support for wildlife conservation (\$360 million in 2023), so collectively, they rank among the world's largest conservation organizations.

I want to thank Delegate Nick Allen for his leadership in introducing SB 634 and making this hearing and this dialog possible.

I am going to focus my testimony on what we know to be true.

<u>We know</u> that wildlife and biodiversity, here in Maryland and across the globe, are in long-term and significant decline. The World Wildlife Fund recently released its <u>2024 Living Planet Report</u>, which illustrates an alarming 73 percent average decline in wildlife populations, since 1970. The <u>Cornell</u> <u>University Lab of Ornithology</u> has documented the loss of 3 billion birds, with "steep, long-term losses across virtually all groups of birds in the U.S. and Canada. The principal causes of these declines are very

difficult to readily control, especially in the near term – like climate change, habitat loss, pollution, poaching and trafficking – but some, are well within our ability to control, like getting lead out of hunting ammunition. It is readily achievable, easily implemented, and directly impactful.

<u>We know</u> that lead is toxic to animal life – human and non-human. And <u>we know</u> that there is no safe level of lead in any animal – human or non-human.

https://www.cdc.gov/biomonitoring/lead_factsheet.html "No safe blood lead level has been identified."

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6675766/ "Lead is a toxic non-essential metal that has no compensatory beneficial effects in living organisms."

<u>We know</u> that lead-based ammunition breaks into fragments when it impacts an animal, like a whitetailed deer, creating dozens to hundreds of tiny, toxic tidbits. <u>We know</u> that non-lead ammunition does not fragment and is non-toxic, and in many cases is ballistically superior to lead ammunition. <u>https://www.usgs.gov/media/images/copper-and-lead-ammunition-comparison</u> "Non-lead ammunition, such as those made from copper, tend to remain intact after impact with their target, while lead ammunition can fragment into many small pieces."

<u>We know</u> that these lead fragments contaminate game meat, and they cannot be effectively removed. <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6675795/</u> "Under normal ... hunting conditions, leadbased bullets commonly contaminate the harvested carcass on a large scale, as well as the viscera." <u>https://www.dnr.state.mn.us/hunting/ammo/lead-short-summary.html</u> "fragments were found so far from the exit wound ... as far away as 18 inches ... routine trimming likely will not remove all of the fragments."

<u>We know</u> that the Maryland DNR acknowledges lead ammunition as a health risk to hunters and their families and friends. This warning is included on page 28 of the <u>Maryland 2024-2025 Guide to Hunting</u> and <u>Trapping</u>:

HUNTERS SHOULD BE AWARE OF LEAD POISONING RISKS WHEN USING LEAD PROJECTILES Even small amounts of lead can cause serious health problems. Young children and pregnant women are particularly susceptible to lead poisoning. <u>Meat from game animals taken with lead fragmenting</u> <u>bullets and shot is a lead poisoning risk.</u> (emphasis added)

<u>We know</u> that lead fragments in the gut piles of field dressed animals, and in wounded and un-retrieved animals is poisoning and killing non-target animals that scavenge on those remains and carcasses, including bald and golden eagles, hawks, owls, vultures, crows, ravens, blue jays, and foxes. <u>https://cwhl.vet.cornell.edu/article/what-you-leave-behind</u> "Ammunition choice makes a difference." <u>https://science.peregrinefund.org/legacy-sites/conference-lead/PDF/0307%20Tranel.pdf</u> "The literature documents over 130 species of wildlife that have ingested lead shot, bullets, or bullet fragments."

<u>We know</u> that the use of lead ammunition in hunting is poisoning almost one-half of the entire continental population of bald eagles, and <u>we know</u> that this poisoning is suppressing growth in the continental populations of both bald and golden eagles.

https://www.science.org/content/article/nearly-half-bald-eagles-have-lead-poisoning "Nearly half of the birds showed signs of chronic lead poisoning—46% of bald and 47% of golden eagles." https://www.science.org/doi/10.1126/science.abj3068 "poisoning at this level suppresses population growth rates for bald eagles by 3.8% and for golden eagles by 0.8%."

<u>We know</u> that the nationwide ban on lead shot for waterfowl hunting (implemented in 1991) has been an unmitigated success, for waterfowl and for waterfowl hunters.

<u>https://www.jstor.org/stable/3802755</u> "... an estimated 1.4 million ducks in the fall 1997 continental flight ... were sparred from fatal lead poisoning."

https://www.fws.gov/sites/default/files/documents/WaterfowlPopulationStatusReport21.pdf Mallard populations had effectively doubled from 1991 to 2019.

And <u>we know</u> that the same arguments being used against SB 634, were used in opposing that 1991 regulatory measure, and were proven wrong, including that additional costs and potential issues with availability of non-toxic ammunition would be a barrier to hunting participation, and that non-toxic ammunition was less effective.

<u>We know</u> that the California ban on lead ammunition that was fully implemented in 2019, has not suppressed hunting participation. In fact, hunting participation increased from 2019 to 2020. <u>https://angeles.sierraclub.org/news_conservation/blog/2021/05/hunters_in_california_ditch_the_lead_and_keep_the_conservation</u> "According to California Department of Fish and Wildlife, nearly 300,000 hunting licenses were issued in the state, a 9% increase from 2019."

<u>We know</u> that non-toxic, non-lead ammunition is available and affordable for rifles and shotguns, in all of the most popular hunting gauges and calibers.

https://vtfishandwildlife.com/hunt/hunting-and-trapping-opportunities/choose-non-lead-ammunition "Non-lead bullets are factory loaded by most manufacturers in most popular big game hunting calibers." https://huntingwithnonlead.org/ "With the increase in demand for non-lead ammunition, more manufacturers are producing more options, in more calibers than ever before. Currently, Barnes, Federal, Hornady, Winchester, and many others offer non-lead factory cartridges." Searching for ammunition using <u>ammoseek.com</u>, on February 25, 2024, I found copper ammunition readily available and at equivalent or cheaper prices than bonded lead: .240 (\$1.43/round vs. \$1.50/round); .308 (\$1.28/round vs. \$1.30/round); 30-06 (\$1.33/round vs. \$1.29/round); 30-30 (\$1.12/round vs \$1.18/round).

There is no evidence to support the notion that any modest increase in the price of ammunition will affect hunting participation. In fact, all evidence suggests that hunting participation is price inelastic. The cost of a Maryland hunting license increased from \$24.50 to \$35.00 in 2024, an increase of nearly 43 percent. In 2022, gas prices were nearly \$5.00 per gallon, while today they are averaging around \$3.25 per gallon. For most hunters, hunting is more than a pastime. It is a passion. There is no evidence to support a claim that any modest increase in ammunition cost would cause a decline in participation. In fact, all available evidence shows that it will not.

I am a hunter. I love hunting, and I love the people with whom I have had the privilege of spending days afield. <u>We know</u> that hunting is in decline, nationally and here in Maryland. Hunters are declining, in terms of the absolute number of people hunting, and as a proportion of the U.S. population. Hunting participation peaked around 1982, when nearly 17 million Americans participated, representing about six percent of the nation's population. Today, participation is about 13 million, representing about four percent of the population.

If we want more people to hunt, or to support hunting even if they don't hunt themselves, then we need to guard its reputation as an ethical and responsible pastime. Using ammunition that is poisoning and killing innocent bystanders – like eagles, hawks, owls, and condors – and feeding contaminated food to families and friends, is the opposite of ethical and responsible.

I've always been proud of my hunting heritage. But frankly, seeing resistance, within the hunting community, to scientifically and ethically compelling issues like this, causes me to wonder if this is a pastime and a community that I want to introduce to my four grandchildren. Fortunately, they are all four years old, or younger, so I have time to consider the question.

Please protect hunting. Protect the families and friends who consume game meat. Protect eagles and the innocent bystanders of the wildlife world that are being poisoned by lead ammunition.

Vote to support SB 634.

Thank you.

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Dr. Jim Keen Testimony SB634 2.pdf Uploaded by: Dr. Jim Keen Position: FAV





March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 – Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

My name is Jim Keen. I am an agricultural and animal protection veterinarian with a Ph.D. in infectious disease epidemiology. I have 37 years of experience as a food animal clinician, a veterinary infectious disease researcher with USDA in Nebraska, and a faculty member at the University of Nebraska School of Veterinary Medicine.

I am currently the Director of Veterinary Science at the Center for a Humane Economy, an animal protection non-profit. I live in eastern South Dakota but I have two brothers and their families who live in Bethesda, Maryland.

I urge the Maryland Senate Education, Energy, and the Environment Committee to support <u>SB 634</u>. A provision of this bill would sensibly require the Maryland Department of Natural Resources (DNR) to create and execute a lead-hunting ammunition phase-out on or before July 1, 2029.

Human health and environmental risks of lead ammunition for deer hunting

Overview: For millions of Americans, game meat, especially venison from harvested deer or elk, is a primary or secondary source of animal protein. There are about 12 million deer hunters in the US, including about 125,000 (2% of the population) in Maryland. American hunters harvest, and their families, friends, and neighbors consume, about 6 million deer annually. According to the Maryland DNR, the total number of deer harvested across the state from September 8th, 2023 through February 3rd, 2024 was 72,642, a number that includes animals harvested during the archery, firearms, and muzzleloader seasons.

About 95% of deer are killed with lead ammunition. However, if an animal is shot using lead ammunition, the meat can be toxic to people who ingest it and to wildlife who scavenge the field-dressed remains or gut piles. This means that many thousands of Maryland's citizens and visitors, including highly lead-toxicosis susceptible children and pregnant women, are exposed to and poisoned to some degree by lead ammunition every year.

Lead is an extremely toxic heavy metal with no biological function. It is poisonous to people and animals at any level. The ingestion of even small quantities of lead has a myriad of adverse health impacts on people, especially children, pregnant women, and unborn children in the womb. Lead is particularly damaging to the brain and nervous system. Because of its well-known toxicity, lead is banned from gasoline, paints, and various household items in most developed countries. Lead ammunition, however, is still widely used for hunting and shooting worldwide and is now likely the greatest, largely unregulated source of lead that is knowingly discharged into our environment by the ton every year.

While lead was banned from waterfowl ammunition in the U.S. in 1991, the majority of people who hunt other types of game still use lead ammunition. A growing body of scientific evidence highlights how the use of lead bullets and shot is causing unnecessary and preventable lead exposure in people, domestic animals, wildlife, and ecosystems, taking the poison far beyond the gun barrel. Poisoning from spent lead ammunition was for decades mainly regarded as a disease of waterfowl, but it also puts at <u>risk the health of raptors</u>, <u>scavengers</u>, and <u>other terrestrial species</u>, <u>including humans</u> who frequently consume hunted game. Lead present in ammunition is now a "One Health" imperative.

Lead contamination from hunted meat has the potential to impact the health of millions of people in the U.S. who are connected to the hunting community, including <u>low-income non-hunting recipients</u> of donated venison. Despite mounting concerns, lead ammunition use continues as hunters and their families remain unaware or mistrustful of the dangers. There are non-lead ammunition alternatives to lead that are reliable, accurate, and affordable. However, hunters are slow to switch, and hunting lobby groups generally oppose any mandatory shift to non-lead bullets, slugs, or shot. By adopting lead-free alternatives, hunters can ensure cleaner wild game, protect themselves, their families, and friends who consume their venison from an unnecessary poisonous chemical risk, and have fewer impacts on nongame wildlife. In other words, to be true wildlife conservationists.

I - A brief history of lead - Lead is a soft, pliable, elemental metal that is found in naturally occurring deposits around the world. While it has been used for centuries for many purposes, lead poisoning has also been known in humans for at least 2,500 years. However, the highly toxic properties of lead have become well-known over just the last 100 years through the issues of food contamination in cans sealed with lead solder, the toxic effects of lead-based paints and glazes, the polluting effects of leaded gasoline, the presence of lead in drinking water passing through pipes connected with lead solder, and, more recently, the toxic effects of lead ingested by wildlife.

People have been consuming meat from wild game animals killed with lead ammunition since the invention of firearms in the early 15th century. The popularity of lead bullets is largely due to their availability, low cost, and their ballistic properties as a soft, malleable, and dense metal.

II - The toxic effects of lead - Lead poisoning occurs when lead builds up in the body over an extended period, often months or years. Exposure to lead can affect multiple body systems and is particularly harmful to young children and women of childbearing age <u>Even small amounts of lead</u> can cause serious health problems. Lead is an element, so it does not break down. Children younger

than 6 years are especially vulnerable to poisoning, which can severely affect mental and physical development. At very high levels, lead poisoning can be fatal.

Children who survive severe lead poisoning may be left with permanent intellectual disability and behavioral disorders. At lower levels of exposure that cause no obvious symptoms, lead is now known to produce a spectrum of injury across multiple body systems. In particular, lead affects children's brain development, resulting in reduced intelligence quotient (IQ), behavioral changes such as reduced attention span, increased antisocial behavior, and reduced educational attainment.

- When lead is ingested, it attacks organs and many different body systems. Lead poisoning can damage the brain, central nervous system, and reproductive system, and cause kidney disease, cancer, high blood pressure, anemia, impotence, birth defects, miscarriage, nerve disorders, memory and concentration problems, and a host of other health disorders. In large enough doses, lead can cause brain damage leading to seizures, coma, and death.
- Lead exposure also causes anemia, hypertension, renal impairment, immunotoxicity, and toxicity to the reproductive organs. The neurological and behavioral effects of lead are believed to be irreversible.
- Lead in the body is distributed to the brain, liver, kidney, and bones. It is stored in the teeth and bones, where it can accumulate over time. Human exposure is usually assessed through the measurement of blood lead.
- Lead in bone is released into the blood during pregnancy and becomes a source of exposure to the developing fetus.
- No level of exposure to lead is known to be without harmful effects.
- Lead exposure is largely preventable.

III - How do lead bullets contaminate meat? Most rifle bullets used for large game hunting are designed to expand upon impact to ensure maximum deadly effect. Expanding, high-velocity lead bullets fragment upon impact, producing shrapnel of various sizes, often microscopic, especially in larger game animals. Many of the fragments in the animal's tissues are tiny microparticles that are too small to see with the naked eye or sense when eating. <u>These fragments scatter into the muscle and entrails of hunted animals, including white-tailed deer</u>. For the venison consumer, these particles accumulate over time and contribute to rising lead levels, increasing the risk of health problems. *A single round can shatter into millions of smaller fragments up to 45 cm away from the bullet's trajectory especially when they strike bone in deer*.

Scientists have used X-rays to visualize and <u>count</u> sometimes hundreds of minute lead particles in hunted meat, and have detected high concentrations of lead in hunted carcasses using chemical analysis. Critically, most lead shards are too small to be seen with the naked eye and minuscule fragments (nanoparticles) are not even detectable by X-rays. The lead shards can also dissolve and poison the surrounding tissues. Both the fragments and the contaminated meat are poisonous when consumed. Shotgun ammunition is another common source of lead in hunted meat.

A strong body of scientific research demonstrates that lead-based ammunition frequently contaminates hunted meat and increases blood lead levels of humans and animals who consume it. The U.S. Food and Drug Administration does not recognize a safe limit for lead in meat.

- In 2008, the <u>Minnesota Department of Natural Resources</u> experimentally shot 80 deer and sheep carcasses and evaluated the presence of lead in each. High-velocity ballistic tip bullets left an average of 141 fragments, an average of 11 inches from the wound channel; some were farther. Soft-core and bonded bullets fragmented less and left 80-86 fragments 9-11 inches from the wound channel. Some fragments were too small to see with anything but a sensitive X-ray image.
- A 2009 study of <u>30 deer harvested with lead bullets in Wyoming</u> and processed by 22 different meat processors found an average of 136 lead fragments per deer; 32% of the burger packages had at least one metal fragment. Twenty percent of the packages had only one fragment, 7% had two fragments, and 5% had 3 to 8 fragments. Burger packages always have more lead fragments than steaks and roasts. The Minnesota Department of Agriculture tested 1,029 commercially ground burger packages and found fragments in 26% but in only 2% of 209 packages containing whole cuts of meat. In a 2008 Wisconsin study, researchers collected 183 packages of venison burger from hunters' freezers, food pantries, and meat processors. They found that 85% of commercially processed burgers and 92% of hunter-ground packages were free of lead.
- <u>Ground venison packets from shotgun- and archery-harvested White-tailed Deer in Illinois</u> in 2013 and 2014 were analyzed for metal contamination. Radiographs indicated that 48% of 27 ground venison packets from 10 shotgun-harvested deer contained metal fragments, while none of the 15 packets from three archery-harvested deer contained fragments.
- Multiple studies have found a direct link between game harvested with lead ammunition and spikes in blood lead. For example, in a <u>2009 North Dakota study</u> with 736 participants, participants who consumed wild game had higher blood lead levels than those who did not consume wild game.
- There is no record of anyone ever getting sick from consuming lead bullet fragments. However, no study has been conducted in the U.S. to understand monthly patterns of blood-lead levels among people who eat lead-hunted meat.

IV – A "One Health" imperative - "One Health" is the idea and approach that the well-being of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent. Lead ammunition is a One Health issue because it can harm all of these domains through various pathways. For example:

- Wildlife can be poisoned by lead from ammunition through scavenging, predation, or ingestion of lead shot, which can affect their survival, reproduction, and behavior.
- A lead fragment the size of a grain of rice is lethal to a mature bald eagle, meaning that a standard 150-grain lead bullet can poison 10 eagles. The deadly metal accumulates in an eagle's system throughout their lives, meaning that there is no safe amount of lead exposure. For this reason, lead is often called "the silent killer."

• <u>Ecosystems can be contaminated by lead from ammunition</u>, which can accumulate in the soil, water, and plants, and affect the biodiversity and functioning of natural systems.

V - Conclusion - Lead ammunition poses a threat to people, animals, and ecosystems. No responsible, and ethical hunter wants to inadvertently poison with lead themselves, their family and friends, or <u>kill an eagle or other raptor</u>. As conservationists, many hunters who are using toxic lead ammunition or improperly disposing of animal remains are probably uninformed about this issue, rather than indifferent to the impacts lead ammunition can have on non-target organisms. By choosing to adopt lead-free alternatives, hunters can ensure cleaner wild game and fewer impacts on nongame wildlife. <u>Non-lead ammunition is readily available</u> and similar in cost to lead ammunition.

Despite overwhelming scientific evidence and increasing policy imperatives, state and national bans on the use of lead shotgun and rifle ammunition are few. North American and European arms industries have developed non-toxic shot and bullets that are as effective and comparably priced as their lead counterparts. Additional scientific research or evidence is not needed to demonstrate the deleterious impacts of lead ammunition on humans, wildlife, and ecosystems. The same rationales that were used to remove lead from gasoline, paints, and household items should now be applied to lead-based hunting ammunition. This is now a socio-political issue requiring political mettle and is no longer in the scientific domain. By choosing to adopt lead-free alternatives, hunters can ensure cleaner wild game and fewer impacts on nongame wildlife.

In closing, for the health and welfare of the people and wildlife in Maryland, please support HB 741 to create a lead-hunting ammunition phase-out on or before July 1, 2029.

Please see the attached addendum of photographs of lead bullet fragmentation inside game carcasses to better understand how lead is readily and frequently ingested by people or wildlife.

Thank you.

Jim Keen, DVM, PhD Director of Veterinary Science Center for a Humane Economy Email: jim.keen@animalwellmessaction.org

VI - Selected references on risks from lead ammunition

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<u>content/uploads/2023/06/Jon-M.-Arnemo</u> <u>8em.pdf</u> *Note*: Jon Arnemo is a pro-hunting Norwegian veterinarian and lead ammunition expert. This article is very readable and I strongly recommend it.

Fact sheet: Environmental and health risks of lead bullets for deer hunting. *Game Management Authority (Australia)*. <u>https://www.gma.vic.gov.au/hunting/caring-for-the-</u>environment/environmental-and-health-risks-of-lead-bullets-for-deer-hunting

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North American Non-Lead Partnership. A collaborative effort involving state wildlife agencies, conservation organizations, and sports groups. Promotes non-lead ammunition among hunters and anglers in North America. <u>https://nonleadpartnership.org/media/en</u>

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Slabe VA, Crandall RH, Katzner T, Duerr AE, Miller TA. Efficacy of non-lead ammunition distribution programs to offset fatalities of golden eagles in southeast Wyoming. *The Journal of Wildlife Management*. 2024 Nov;88(8):e22647. <u>https://www.researchgate.net/profile/Guillermo-Wiemeyer/publication/380290446 Lead poisoning of raptors state of the science and cross-discipline mitigation options for a global problem/links/6748c98f790d154bf9b3288f/Lead-poisoning-of-raptors-state-of-the-science-and-cross-discipline-mitigation-options-for-a-global-problem.pdf</u>

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An assortment of lead bullets showing shot fracturing next to similar fired copper variants

Images from https://huntingwithnonlead.org/



Researchers point out that the use of lead ammunition isn't just an issue for those living in the far-flung parts of the world – it is a global One Health issue.

Figure from: Arnemo JM, 2022. "Lead ammunition used by hunters has us all in its sights." Outreach, Inland Norway University of Applied Sciences. https://researchoutreach.org/wp-content/uploads/2023/06/Jon-M.-Arnemo_8em.pdf



A radiograph (X-ray) showing lead bullet fragmentation in a deer carcass. The "white spots" are bullet fragments. Many lead fragments are microscopic and are undetectable during butchering or when the venison is eaten. https://ca.audubon.org/news/man-who-sounded-alarm-about-lead-ammunition-and-public-health

HOW DOES LEAD AFFECT BALD EAGLES?



Legal hunting and fishing support conservation efforts. However, the use of lead ammunition and fishing tackle can have unintentional consequences for native wildlife.



Lead enters our ecosystem when gut piles or carcasses are abandoned, when quarry escapes after being shot, or when fish break the line and swim off with tackle.



Going lead-free protects bald eagles and other wildlife. Lead-free alternatives are becoming more affordable, offer greater accuracy, and ensure the highest quality game meat.

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AMERICAN EAGLE DAY

OIN US. TAKE ACTION, MAKE & DIFFERENCE.



A lead fragment the size of a grain of rice is lethal to eagles. Lead accumulates in the system over time, so there is no safe amount of lead exposure.



X-rays of deer carcasses shot with lead bullet & copper bullet.



- Bright white spots = lead fragments
- Spread throughout animal's body
- Contaminate meat & environment

30 caliber Winchester magnum lead core w/ copper jacket • Highly toxic

• Hundreds of fragments



No copper bullet fragments

30 caliber Winchester magnum solid copper bullet

- Non-toxic
- No fragmentation

A Visual in Regards to the Horrific Impacts from L Uploaded by: Elaine Leslie

Position: FAV

A Visual in Regards to the Horrific Impacts from Lead Poisoning







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March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 - Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

Thank you for this opportunity to weigh in on this important issue on behalf of the Coalition to Protect America's National Parks (Coalition), which represents over 2,800 current, former, and retired employees and volunteers of the National Park Service (NPS). Collectively, our membership represents over 50,000 years of national park management and stewardship experience. Our members include former National Park Service directors, deputy directors, regional directors, and park superintendents and scientists, as well as a variety of program specialists and field staff. Recognized as the Voices of Experience, the Coalition educates, speaks, and acts for the preservation and protection of the National Park System, and mission-related programs of the National Park Service. Twenty-four of the National Park Service units are with the borders of the state of Maryland including National Battlefields and Historic Parks, National and Scenic Waterways and Trails.

I am testifying in support of support of SB 634, the Maryland bill to phase-out lead ammunition.

I have been a wildlife biologist for over forty years, having worked in national parks from Grand Canyon to Colonial National Historical Park to overseeing the national program for biological resources for the National Park Service agency in Washington D.C. I have been aware of this issue after having worked on the restoration of California condors in Grand Canyon National Park in the mid-90's and have been working diligently on the matter ever since. If you have ever watched a condor soar over one of our grandest national parks, only to be laid out in a vet's office days later dying of lead poisoning, you will never forget the pain and suffering. After having worked with Dr. Bryan Watts, Conservation Biology Institute out of William and Mary, on the mid-Atlantic bald eagle population and lead levels, from Virginia up the coast along the Chesapeake and Potomac and our parks within Maryland boundaries, I became quite aware that while the bald eagle population appears to be recovering, they and other species are still impacted by lead as they scavenge on tainted carcasses from lead ammunition and fishing tackle. And those are just the species we closely monitor.

You may be aware of S. 4157¹, the LEAD Act of 2022, which was introduced by Senator Tammy Duckworth on May 5, 2022. A similar bill, H.R. 405² had been introduced in the House by Congressman Ted Liu in 2021. S. 4157 would prohibit the use of lead ammunition in units of the National Wildlife Refuge System. All of the findings stated in Section 2 of the bill regarding the adverse impacts of lead on human health, the environment, and wildlife are equally applicable to lands and waters in this nation where we hunt and fish. We call your attention to recent U.S. Fish and Wildlife Service (USFWS) "station specific" hunting and sport fishing regulations³ that begin to phase out the recreational use of "lead" on National Wildlife Refuges across the country. In these regulations, the groundwork is laid for addressing restrictions on lead ammunition and fishing tackle and protection of our natural environment, on a national level and on a state-by-state approach. Today, we commend Maryland for addressing these much-needed conservation actions.

The adverse impacts of lead poisoning on wildlife and their habitats have been known for decades and are well-documented. For example, a recent U.S. Geological Survey study⁴ found that nearly half of all bald and golden eagles in the country suffer from chronic and/or acute lead poisoning, likely the result of these birds scavenging the remains of animals shot with lead bullets. It should be noted that the use of lead ammunition is not just an issue in regards to large game, but also in sport hunting of so called "varmints" such as prairie dogs, marmots, coyotes, fox, etc. These carcasses are generally discarded in the field and left for such species as eagles, and any scavenging wildlife, to feed upon-ingesting poisonous lead fragments. In addition, there are a plethora of peer-reviewed scientific studies, worldwide, documenting the adverse impacts of lead on avifauna, herpetofauna, mammals from grizzly bear to small rodents, as well as to the environment on our lands and in our waters.

While the devastating effects of lead poisoning may be most acute and observed in raptors and condors that have been heavily monitored, more than 130 national park wildlife species are exposed to or killed by ingesting lead or prey contaminated with lead. At the same time, lead fishing tackle left in waters, leads to elevated levels of lead in fish, birds, and amphibians. These

¹ <u>https://www.congress.gov/bill/117th-congress/senate-bill/4157/text?r=2&s=1</u>

² https://www.congress.gov/bill/117th-congress/house-bill/405/text

³ https://www.regulations.gov/document/FWS-HQ-NWRS-2022-0055-16104

³ https://www.science.org/doi/10.1126/science.abj3068

impacts, in addition to loss of habitat or habitat quality due to land conversion and fragmentation, invasive species, and climate change, negatively affect the health of our nation's resources. We know wildlife knows no human construct of boundaries, so what happens on state, federal, or community lands and parks cross over to the other-animals may be contaminated on a federal property and then die on a state property. We only know the tip of the iceberg when it comes to mortalities from lead poisoning.

In addition to the numerous studies documenting the impacts of lead on wildlife, there is also an abundance of peer-reviewed science regarding the negative effects of lead poisoning on humans. Lead exposure is a significant public health concern due to its persistence in the environment. Lead poisoning can affect children, especially in underserved communities globally, according to a study published by the United Nations Children's Fund (UNICEF) in 2020. Lead exposure is not just limited to situations involving lead paint or antiquated public water systems that still rely on lead pipes. The impacts of lead poisoning on underserved communities can also be connected to hunting and fishing activities and is of the utmost concern. The concern should be for hunters and their families consuming tainted meat and the protections of all humans and wildlife from lead poisoning.

This is not a testimony to ban hunting or gun use. It's about hunters and others be an integral component of this much needed conservation effort. The ecological toll of ongoing lead contamination is completely avoidable as there are equally effective, less toxic alternatives to lead-based ammunition and tackle readily available at comparable cost. Moreover, several counties and states, including California where Redwoods National Park and the Yurok tribe recently restored the California condor, and many other countries worldwide have successfully banned or severely restricted the use of lead-based recreational ammunition and tackle with little or no negative repercussions or lingering consumer objections.

From a purely conservation and human health perspective, the case for the phase-out of lead is clear. We truly believe that many species such as trumpeter swans, loons, a large part of the waterfowl population, and others that fly and migrate through the nation's skies would not be here today if not for the US Fish and Wildlife Service actions on lead shot decades ago. The state of Maryland can now set an example and implement the most effective wildlife protection measures available. By addressing this issue now, Maryland can be a conservation leader and can stop the ongoing accumulation of toxic lead in the environment and help ensure the long-term conservation of the state's resources for this, and future generations to come.

Sincerely,

Elaine F. Leslie Coalition to Protect America's National Parks Email: <u>mailto:editor@protectnps.org_and_eflwl@outlook.com</u> 2 Massachusetts Ave NE, Unit 77436 Washington, DC 20013

Audubon.Lead.SB634.fav.pdf Uploaded by: Jim Brown Position: FAV



February 28, 2025

To: Chair Feldman and members of the Maryland Senate Committee on Education, Energy and the Environment

From: Jim Brown, Policy Director, Audubon Mid-Atlantic

Subject: Favorable Testimony for Maryland SB 634 – Lead and Lead Based Ammunition Phaseout

Audubon Mid-Atlantic submits this testimony in support of Senate Bill 634, phasing out the use of lead ammunition in hunting in Maryland. Audubon Mid-Atlantic is the regional office of National Audubon Society, representing over 35,000 Marylanders who advocate for the protection of birds, bird habitat, and policies aiming to protect both birds and human communities in the face of increasing environmental challenges, habitat loss, pollution, and climate change. The above listed Audubon chapters are part of the Audubon network in Maryland, representing the diverse people and ecosystems of the state. We work with partner organizations, government agencies, and local communities to protect birds and the places they need to survive now, and into the future. SB 634 will protect birds, with benefits offering better health outcomes for other species, including people.

We know that no amount of lead is safe for public health. For these reasons, The U.S. Government removed lead from toys, furniture, house paint and gasoline. Safer, affordable, lead-free ammunition alternatives are available. It is time to embrace lead-free ammunition for hunting in Maryland. From our Atlantic shoreline and Chesapeake Bay marshes to our public lands and western Maryland mountains, birds in Maryland are under threat. They all travel through or live in areas where hunting is permitted, and as such face serious threats from the effects of lead in ammunition. SB 634 will create the groundwork for reducing these threats and it will hold Mayland up as a leader in conservation planning.

Threats to Bald and Golden Eagles

Lead toxicity has been shown to have population-level impacts on Bald Eagles. Bald Eagle population growth is estimated to experience 4.8% suppression from lead toxicity alone, and Golden Eagle population growth is suppressed 0.8. (1) Other studies have shown that lead reduces the overall resilience of Bald Eagle populations,(2) increases susceptibility to other environmental toxins like mercury,(3) and impairs motor and immune function.(4) Bald Eagles were only recently delisted from endangered status and many wildlife experts feel Eastern Golden Eagles warrant stronger protections due to declining populations in the United States.(5) Both species are protected under the Bald and Golden Eagle Protection Act which mandates Eagles not suffer take, meaning no one is permitted to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb [Bald and Golden Eagles]."(6) Despite this, Eagles are being poisoned by contaminated game which was killed with or ingested lead.

Threats to Avian Scavengers and Upland Game Birds

Avian scavengers such as vultures, and corvids are also victims of lead poisoning. Acute and chronic exposure to lead causes lethal and sub-lethal outcomes for numerous species.⁽⁷⁾ Organ failure, immune suppression, and impaired reproduction are all potential outcomes of lead exposure on the aforementioned species. Upland game birds such as Mourning Doves are also heavily impacted. Like some waterfowl, Mourning Doves and other upland game birds such as Ring-necked pheasants, Northern Bobwhite Quail, and Wild Turkeys have all been reported ingesting spent lead shot.⁽⁸⁾ A study on Mourning Doves found that the doves ingested both steel and lead shot; the birds which ingested non-lead shot were found to have much lower bone lead concentrations, indicating greater overall health and fewer potential negative side effects.⁽⁹⁾

Threats to Waterbirds

Discarded lead fishing tackle is also a major threat to wildlife. Lead fishing tackle is easily mistaken for grit or stones which may be ingested by waterbirds. When the lead is exposed to the digestive acids in gizzards and stomachs, it begins to dissolve and absorbs into the bloodstream where it can cause behavioral and physiological changes.(10) A single lead sinker or jig is toxic enough to kill a loon when ingested,(11) with as many as 25% of adult loon deaths in some states due to lead ingestion.(12,13) Swans are also at risk, ingesting lead sinkers and jigs in shallow water, or ingesting lead fragments and ammunition when feeding in upland habitat.

Lead ammunition violates conservation and wildlife management principles. For humans or wildlife, no amount of lead in our environment is safe. Lead phase-outs work, and alternative ammo available and cost-effective. For these reasons, Audubon Mid-Atlantic respectfully urges a favorable review of this legislation.

Thank you,

Jim Brown, Audubon Mid-Atlantic

Sources:

- 1. Slabe et al. (2022. Demographic implications of lead poisoning for eagles across North America. Science, 375. Pp. 779-782.
- 2. 2Hanley, B. J. et al. (2021). Environmental lead reduces the resilience of bald eagle populations. The Journal of Wildlife Management, 86(22177).
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- 4. Golden, N.H., Warner, S.E., and Coffey, M.J. (2016). A Review and Assessment of Spent Lead Ammunition and Its Exposure and Effects to Scavenging Birds in the United States. Reviews of Environmental Contamination and Toxicology, 237. Pp. 123-191.
- 5. Hunt, W. G et al. (2017). Quantifying the demographic cost of human-related mortality to a raptor population. PLoS One 12:e0172232.
- 6. https://www.govinfo.gov/content/pkg/USCODE-2010-title16/pdf/USCODE-2010-title16-chap5A-subchapII.pdf
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- 8. https://pubs.usgs.gov/fs/2009/3051/pdf/fs2009-3051.pdf
- Franson, J.C., Hansen, S.P., and Schulz, J.H. (2009). Ingested shot and tissue lead concentrations in mourning doves. Ingestion of Spent Lead Ammunition: Implications for Wildlife and Humans (chapter). Peregrine Fund. Pp. 175-186.
- 10. Michael, P. (2006). Fish and Wildlife Issues Related to the Use of Lead Fishing Gear. Washington Department of Fish and Wildlife: Fish Program.
- 11. Grade, T.G., Pokras, M., et al. (2019). Lead poisoning from ingestion of fishing gear: A review. Ambio, 48(0). Pp. 1023-1038.
- 12. https://wildlife.onlinelibrary.wiley.com/doi/full/10.1002/jwmg.21348 17 https://www.pca.state.mn.us/air-water-land-climate/getting-lead-out-of-fishing-tackle

MOS SB0634 Nonlead Ammunition, Fox Chasing, and De

Uploaded by: Kurt Schwarz Position: FAV

MARYLAND ORNITHOLOGICAL SOCIETY



February 28, 2025

Bill: https://mgaleg.maryland.gov/2025RS/bills/sb/sb0634F.pdf

Committee: Education, Energy, and the Environment

Testimony on SB0634 Hunting—Nonlead Ammunition, Fox Chasing, and Deer Managment

Position: Favorable

The Maryland Ornithological Society (MOS) supports SB0634.

We strongly favor the addition of one full-time employee to the Deer Management Assistance Program within the Department of Natural Resources and the phase-out of lead ammunition for hunting of all game species. We do not take a position at this time on fox chasing.

Deer Management Assistance Program

Deer over-population is a serious problem for out nesting songbirds. When deer become too numerous, they can denude the understory of a forest, leaving nothing but non-native Japanese stilt grass and other exotic invasives, and can be observed in many places in Patapsco Valley State Park and other public and private lands across the entire state. This eliminates nesting places for forest-interior dwelling species (FIDS) that nest on or near the ground, such as Ovenbirds, Hooded Warblers, ¹and Kentucky Warblers. All three species are considered by Maryland as Species of Greatest Conservation Need (SGCN).

The overpopulation of deer also substantially results in many human deaths, injuries, and property damage to vehicles through deer-vehicle collisions.

The Deer Management Assistance Program educates and assists farmers with deer management on private lands. An additional full-time person will promote more deer control, and this will benefit our nesting birds.

Nonlead Ammunition Phase-Out

MOS strongly supports an overall lead ammunition phase-out in Maryland. Lead has no biological function, which makes it particularly toxic to wildlife and humans alike. Lead poisoning is a serious problem to all birds, but especially waterfowl and scavenging birds, such as vultures, hawks, eagles, and owls. Lead poisoning is a serious issue at any location where hunting is being conducted with lead shot/bullets Our local raptors can consume lead left behind in gutpiles left by hunters, or in carcasses of dead animals shot with lead shot/bullets. Waterfowl can consume spent lead shot in areas where hunting has occurred for many years. Environmental lead also presents an imminent danger to all humans, especially children, as no safe level of lead has ever been found. Even the smallest amounts of lead tested by scientists have caused noticeable adverse effects. Clearly, we should be reducing, and hopefully eliminating, further lead use and deposition in our environment.

In addition, there is a danger to humans eating game shot with lead. Lead bullets fragment and humans can inadvertently eat the lead fragments, as well as lead shot. It is recommended that children and pregnant women not eat game taken with lead ammunition. The best way to avoid lead poisoning is to use lead-free ammunition.²

Contrary to the assertions of some opponents of nonlead ammunition, MOS strongly supports hunting as an effective game management tool. The elimination of lead ammunition should not seriously decrease hunting. In 1991 the United States banned lead shot for waterfowl hunting. Waterfowl hunting goes on today, and over time there has been a decrease in blood level concentrations in ducks.³

It is often complained that nonlead ammunition costs more. However, according to the Maine Department of Inland Fisheries and Wildlife, the cost differential of a box of copper bullets versus a box of lead bullets is less than \$10, and for premium ammunition there may be no cost difference.⁴

Birds in the United States, and North America overall, face numerous threats to their existence and many species are in grave trouble. North America has lost almost 30% of all of its birds since 1970⁵. Clearly, we should be working to eliminate further lead deposition in our environment.

We emphatically urge the Committee to issue a favorable report for HB0634, to enhance deer control, and phase-out toxic lead ammunition.

Kurt R. Schwarz Conservation Chair Emeritus Maryland Ornithological Society www.mdbirds.org

https://www.science.org/doi/10.1126/science.aaw1313?adobe_mc=MCORGID%3D242B647254 1199F70A4C98A6%2540AdobeOrg%7CTS%3D1707754028

¹ Maryland State Wildlife Action Plan, 2015, Appendix 1a. page 5, <u>https://dnr.maryland.gov/wildlife/Documents/SWAP/SWAP_AppendicesChapter1.pdf</u> ² Lead in wild harvested game, Colorado Department of Public Health and environment, <u>https://cdphe.colorado.gov/lead-health/lead-in-wild-harvested-game</u>

³ Lewis, N.I., et al, Blood level declines in wintering American black ducks in New Jersey following the Lead Shot ban, Journal of Fish and Wildlife Management, 12(1), 2021.

⁴ Hunting with Nonlead Ammunition, Maine Department of Inland Fisheries & Wildlife, 2024, <u>https://www.maine.gov/ifw/hunting-trapping/hunting/nonlead-ammunition.html</u>

⁵ Rosenberg, Kenneth V. et al, Decline of the North American avifauna, Science, VOL 366, NO. 6451, 19 September 2019,

Hunting - Nonlead Ammunition, Fox Chasing, and Dee Uploaded by: Lisa Radov

Position: FAV

MARYLAND VOTES FOR ANIMALS



PO Box 10411 Baltimore, MD 21209

March 4, 2025

To: Senate Education, Energy, and the Environment Committee From: Lisa Radov, President and Chair, Maryland Votes for Animals, Inc. Re: Hunting - Nonlead Ammunition, Fox Chasing, and Deer Management– SB 634 – Support

Chair Feldman, Vice - Chair Kagan, members of the Education, Energy, and the Environment Committee, thank you for the opportunity to testify before you today. My name is Lisa Radov. I am the President and Chair of Maryland Votes for Animals. We champion humane legislation to improve the lives of animals in Maryland. Speaking for Maryland Votes for Animals, our Board of Directors, and our members across Maryland, I respectfully request that the Education, Energy, and the Environment Committee vote favorably for Hunting - Nonlead Ammunition, Fox Chasing, and Deer Management– SB 634.

This bill would phase out the use of toxic lead ammunition for the hunting of all game species in Maryland by July 1, 2029. It would also make some definition changes of "hunt" to include fox chasing and establish the Deer Management Assistance program in the Department of Natural Resources.

Lead and lead-based ammunition have been studied extensively for over 100 years because of lead's negative impacts on wildlife and humans. Numerous species of wildlife that are found in Maryland are poisoned by lead bullets and shells including hawks, ravens, turkey vultures, eagles, and grizzly bears.

Lead causes widespread damage to cells and organs when it is ingested, inhaled, or absorbed in surprisingly small quantities. Lead fragments have been found in wild game meat processed for human consumption. Even if a hunter attempts to remove the largest remaining pieces of the bullet from the dead animal, tiny fragments of lead, enough to poison both humans and wildlife, remain in both the meat and parts that are left behind.

Hunters can use alternatives to lead in shot and rifle bullets. These include steel, copper, bismuth, and tungsten. Research has shown that they are as effective as lead but with the significant advantage that they are not toxic. We must factor in the environmental impacts of using lead ammunition and transition to safer alternatives.

It's time to get the lead out!

In closing, I would like to thank Senator Lewis Young for her sponsorship of SB 634 and ask the committee for a favorable report.

Dr. Mark Pokras Testimony for MD SB 634 .pdf Uploaded by: Mark Pokras

Position: FAV


March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 - Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

I am submitting testimony today wearing several hats. One is that of a lifelong outdoorsman. One is in my role as a health professional. And one is my role as a scientist who has spent over 50 years in environmental conservation; nearly 40 of those years studying health and disease in wildlife. I am an Emeritus Associate Professor of Wildlife Medicine at The Cummings Veterinary School, Tufts University, and former director of both Tufts Wildlife Clinic, and Tufts Center for Conservation Medicine.

Since 1987 my students and I have performed necropsies (post-mortem examinations) on thousands of wild birds from all over the eastern United States. Our work has documented a wide variety of causes of death including disease, predators, human caused problems (including gunshot, entanglement, oil spills, etc.). But I can unequivocally say that a very significant cause of death in many wild birds is lead poisoning. We continue to exhaustively document lead toxicosis from ingested bullet fragments and shotgun ammunition in a wide variety of species including bald and golden eagles, and a great many aquatic birds. It is discouraging how common this poisoning is. As an example, I've been involved in investigating several cases of wildlife lead poisoning in the last week.

As a life-long outdoors person, I deeply appreciate that sportsmen (and women) have a long and distinguished history as committed conservationists. Hunters and anglers play important roles in protecting the biodiversity and health of our natural ecosystems. I say this, because it is very important to understand that the large majority of proponents of this bill are NOT antisportsmen. But we are asking hunters, and anyone involved in the shooting sports, as concerned conservationists, to help eliminate the use of lead ammunition. I would ask them to join in taking this important step in adapting their practices and equipment for the good of protecting the environment, human health, and the species we all cherish.

Over 30 years ago, waterfowl hunters took a similar step when they changed from using toxic lead shot to non-toxic products. At that time, concerns were expressed about the cost and performance of the non-toxic alternatives, but hunters all over the U.S. successfully made the change. Now we're asking others to take a similar step.

As a health professional I feel that it is important to emphasize that for both human and veterinary medicine, there is overwhelming scientific consensus that lead is profoundly toxic. <u>NO</u> level of exposure is considered safe for people, domestic animals, or wildlife species. Whether the lead comes from paint, gasoline, mining, industrial processes, or sporting goods, this metal is toxic and cumulative in us and other species. The websites and publications of such agencies as the CDC, OSHA, US EPA, US Fish & Wildlife Service, USGS and many others emphasize the toxicity of lead. Shouldn't we ask ourselves if there's ANY reason to put large amounts of such a long-acting, persistent poison into our environment?

Traditionally, wildlife managers have primarily been concerned about threats to animal health in two circumstances. First, if such threats are shown to have population level effects on the species in question, and second, if these threats may serve a sentinel function to protect human health. There is no doubt that both of these are good reasons to replace lead in ammunition with non-toxic alternatives.

But I would be remiss if I did not point out the significant benefits to individual animals of switching to non-toxic ammunition. Hunters have long been some of our most ardent conservationists and traditionally abhor the unnecessary killing of non-target animals. Even if lead poisoning is not having a population level effect on a particular species, it is killing large numbers of animals in a manner that is prolonged, painful, and cruel. This flies in the face of two of the historic central tenets of sporting traditions: first, that we should avoid harm to non-target species, and second, that wild animals being taken for food or sport should, whenever possible, be afforded a quick death.

Lead poisoning is inhumane and causes unnecessary stress, pain, and suffering in a wide variety of species including people, dogs, horses, ruminants, and birds. There is abundant literature over many years to demonstrate acute abdominal pain, peripheral muscle pain and weakness, incoordination, seizures, anemia, gout, and other clinical problems seen in many species. It is worth the small economic cost to eliminate this poison from our outdoors activities to save large health care costs treating animals and humans from debilitating illness or even death.

Eliminating lead from ammunition and other sporting goods also directly benefits human health. In the process of making and using ammunition, people are exposed to lead in many ways. Mining, smelting, manufacturing, and use of lead products, including ammunition, contaminates people and the environment. Meat taken from animals shot with lead projectiles regularly contains small lead particles, and an increasing number of agencies and organizations caution that sensitive populations, like children or women of child-bearing age, should not eat meat harvested with lead bullets or shot. In most of the U.S., few food assistance programs screen donated game meat for lead. And of course "the needy" often have other significant sources of lead in their lives — including housing, drinking water, or occupational exposures.

Conclusion

From our years of work, I can categorically state that lead toxicosis from ingested ammunition is a serious problem for eagles and other wildlife in Maryland, the U.S. and abroad. I am in frequent contact with biologists studying eagles throughout the country, and can testify to the consistency of their findings and ours over time. It is especially serious that much of the

mortality is in breeding, adult animals, a critical group from the standpoint of population stability – especially as we consider the other threats that face eagles and other wildlife in our changing world.

I would strongly recommend that committee members as well as anyone interested issues of lead poisoning take the time to examine the following publications, available full text on the internet as well as some other documents I've appended to this testimony:

1. Proceedings of an international meeting, 2008. Ingestion of Lead from Spent Ammunition: Implications for Wildlife and Humans.

https://science.peregrinefund.org/legacy-sites/conference-lead/2008PbConf_Proceedings.htm

2. Ambio 48 (9), Sept. 2019 -- Special Issue: Lead in Hunting Ammunition: Persistent Problems and Solutions. <u>https://link.springer.com/journal/13280/volumes-and-issues/48-9</u>

3. Kanstrup, N. 2024. The transition to non-lead ammunition: an essential and feasible prerequisite for sustainable hunting in modern society. Aarhus University, Department of Ecoscience. https://dce.au.dk/fileadmin/dce.au.dk/Udgivelser/Eksterne_udgivelser/BlyBog.pdf

Thank you for your attention. I would be happy to provide any additional information that the committee might need.

Mark A. Pokras, B.S., D.V.M.

Mark A. Pokras, B.S., D.V.M. Associate Professor Emeritus Wildlife Clinic & Center for Conservation Medicine Cummings School of Veterinary Medicine, Tufts University Dept. of Infectious Disease and Global Health N. Grafton, MA USA 01536-1895 email: mark.pokras@tufts.edu

home: Scarborough, ME 04074

Enclosed Attachments:

Buenz, EJ, Parry, GJ, Hunter, S, *et al.* X-ray screening of donated wild game is insufficient to protect children from lead exposure. Discover Food 4, 31 (2024).

Katzner, TE, et al. 2024. Lead poisoning of raptors: state of the science and cross-discipline mitigation options for a global problem. Biol Rev, Camb Philos Soc. 99:1672-1699.

Pokras, MA and MR Kneeland. 2008. Lead poisoning: using transdisciplinary approaches to solve an ancient problem. EcoHealth 5(3): 379-385.

SB 634 - CBF - FAV.pdf Uploaded by: Matt Stegman Position: FAV



Environmental Protection and Restoration Environmental Education

Senate Bill 634

Hunting - Nonlead Ammunition, Fox Chasing, and Deer Management

Date:	March 4, 2025	Position:	FAVORABLE
То:	Education, Environment, and the Environment Committee	From:	Matt Stegman,
			MD Staff Attorney

Chesapeake Bay Foundation (CBF) **SUPPORTS** Senate Bill 634 which will, among other provisions, phase out the use of lead-based ammunition by hunters on or before July 1, 2029.

Lead (Pb) is toxic and is banned from gasoline, paints, and various household items in most developed countries. Lead ammunition, however, is still widely used for hunting and shooting, and is now likely the greatest, largely unregulated source of lead that is knowingly discharged into the environment in the United States.¹

Scientists across North America and Europe have published consensus statements on the risks to wildlife, the environment, and human health from the use of lead ammunition and the need for its replacement by non-toxic alternatives. Lead has the potential to be bioaccumulated through the food chain to higher concentrations. In fact, the Center for Disease Control affirms that there is no safe level of lead for children.²

CBF urges the Committee's FAVORABLE report on Senate Bill 634.

For more information, please contact Matt Stegman, Maryland Staff Attorney, at <u>mstegman@cbf.org</u>.

¹ Health Risks from Lead-Based Ammunition in the Environment—A Consensus Statement of Scientists <u>2013</u>; U.S. Geological Survey <u>2013</u>.

² <u>https://www.cdc.gov/nceh/lead/faqs/lead-faqs.htm</u>

Maryland Office • Philip Merrill Environmental Center • 6 Herndon Avenue • Annapolis • Maryland • 21403

Michelle Lute Testimony.pdf Uploaded by: Michelle Lute Position: FAV



March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 – Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

On behalf of Wildlife for All, a national organization to transform state wildlife management to prioritize the protection of all wildlife species and ecosystems, we urge you to support SB 634 to phase out the use of lead ammunition for hunting in Maryland.

The science is beyond question: lead bullets cause harm to wildlife and humans. With safer, affordable, and high-performance alternatives available, it's time to move past the ammunition of the past to a solution that benefits us all.

Lead ammunition harms non-target wild animals.

A 2022 study in Science examined 1,210 bald and golden eagles across 38 states and found that nearly half of them had "bone lead concentrations above thresholds for chronic poisoning."

For humans or wildlife, no amount of lead in our environment is safe.

Lead bullets pose a serious health threat to hunters and their families. Fragments of lead are very difficult to remove from meat. Lead "can lead to a variety of neurological disorders in humans, such as brain damage, mental retardation, behavioral problems, nerve damage, and possibly Alzheimer's disease, Parkinson's disease, and schizophrenia," according to the National Institutes of Health.

Lead phase-outs work, and alternative ammo available and cost-effective.

California phased out all lead ammunition in 2019, with documented beneficial effects on wildlife and no disruption in hunting participation. Nationwide, millions of hunters already use alternative forms of ammunition, with lead alternatives such as steel, copper, and bismuth widely available, and often cheaper than premium lead.

USFWS banned lead shot for waterfowl hunting in 1991. Lead poisoning mortality for mallards dropped by nearly two-thirds, protecting ducks and leaving more wildlife alive for all wildlife stakeholders.

Thank you for giving this issue your consideration.

Sincerely,

Miche Stoo

Michelle L. Lute, PhD EXECUTIVE DIRECTOR | Wildlife for All

25 03 04 SoMDAudubon nonlead ammo bill.pdf Uploaded by: Molly Moore

Position: FAV

Date: March 4, 2025 The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 – Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

Southern Maryland Audubon, representing 650 members, strongly supports SB 634—Nonlead Ammunition Phase-Out- and urges you to pass this bill out of committee.

Nearly half of Bald Eagles—our national bird— in Maryland and across the United States suffer from chronic lead poisoning, according to a ground-breaking study conducted by the U.S. Geological Survey, U.S. Fish and Wildlife, Virginia Wildlife Center of Virginia, West Virginia University and Conservation Science Global published in 2022.

Eagles, vultures and other raptors ingest the lead when they feed on the remains of deer and other animals that have been killed with lead ammunition. In Southern Maryland, where I reside, we often see large flocks of vultures, interspersed with Bald Eagles, feeding on the remains of deer carcasses hunters leave behind for scavengers after they have dressed out the deer.

This is the unseen challenge affecting birds of prey: Even small exposures to lead can build up over time, causing devastating illness in eagles and other raptors. Common symptoms include brain swelling, respiratory distress, muscle weakness, dehydration, starvation, kidney and liver damage and seizures. Neurological damage can result in loss of vision, coordination and nerve function making the bird appear "drunk" or unable to stand.

Over an eight-year period, researchers from the organizations we site above examined samples of bones, feathers and livers from more than 1,200 bald and golden eagles from 38 states, and tested blood from about 620 live birds.

The study found that bald eagles in D.C., Maryland and Virginia had lead concentrations in their blood and livers that measured above the threshold for clinical lead poisoning. Roughly 46 percent of eagles from the region had lead in their femurs that was also high, suggesting they'd had chronic lead poisoning, or what scientists call "a lifetime of exposure." A prime cause is eating animals killed by lead ammunition.



Here's what lead poisoning looks like in a Bald Eagle. The bowed head, drooped wings, and green stained tail feathers are all typical signs of lead poisoning of raptors. This Bald Eagle was admitted to The Raptor Center in St. Paul, MN where it was determined by veterinarians to be poisoned by lead.

Our national bird was brought back from the brink of extinction 50 years ago. But major challenges to their health and survival remain. You can help protect our national bird by voting yes on SB 634.

If you have any questions or need assistance, please let me know. I appreciate your support and look forward to working together to advance this important bill!

Molly Moore President, Southern Maryland Audubon 14955 Deer Haven PL Newburg, MD 20664

Paula Goldberg testimony.pdf Uploaded by: Paula Goldberg Position: FAV

Date: March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 – Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

My name is Paula Goldberg. I am a licensed wildlife rehabilitator in the state of Maryland. I am a member of the Board of Directors of the Maryland Wildlife Rehabilitators Association. We serve on the front lines of wildlife health and care for sick, injured, and orphaned wildlife year round.

On December 5, 2017, 11 days into the fire-arms deer season, City Wildlife in Washington DC – where I was then the Executive Director – received a call from a MD DNR wildlife technician.

A downed Bald Eagle had been found in some woods, about 100 feet from a road in Nanjemoy, MD (Charles County). City Wildlife was the closest wildlife rehab location where the bird could be triaged and evaluated by a wildlife veterinarian.

On intake, the eagle was alert, feisty, but it was falling over on its left side in the carrier. It was unable to stand. It was "neurologic".

Although its weight and body condition were reasonable, its blood lead level was in the moderately elevated range. Diagnosis? Lead toxicosis.

The eagle received fluids and medications for severe pain. Lead chelation therapy was begun.

We were optimistic about this bird's prognosis, but it succumbed within 48 hours. The likely source of this eagle's lead poisoning was lead shot from deer gut piles, left by hunters who used lead ammunition which the eagle scavenged.

So, within 11 days of the opening of firearms deer hunting season, this eagle ingested a lethal dose of lead. It was poisoned. It was unable to stand, unable to fly, and unable to escape capture.

Mercifully, its journey ended in a quiet, safe place where its pain was managed.

The end-of life story for this magnificent bird, the emblem of our nation, was made into a teachable moment.

The news of its demise was carried by multiple news outlets including DC's NPR-affiliate, WAMU, the Washington Post, and National Geographic.

Please vote to phase out lead ammunition used for hunting. Please vote for SB 634.

Paula Goldberg (she/her)

(h) 301.652.0653 (c) 240.447.4235

"Instructions for living a life: Pay attention. Be astonished. Tell about it." --Mary Oliver

SB634_FAV_Humane World for Animals.pdf Uploaded by: Stacey Volodin

Position: FAV



Formerly called the Humane Society of the United States and Humane Society International

March 4, 2025

Education, Energy, and the Environment Committee SB635 Hunting - Nonlead Ammunition, Fox Chasing, and Deer Management FAVORABLE

On behalf of Humane World for Animals Maryland members and supporters, we offer our enthusiastic support for SB 634 to phase out the use of highly toxic lead ammunition in our great state, for the following reasons:

1. Lead is highly toxic to humans

Lead is a toxic substance.¹ Lead poisoning has been documented in humans for more than 2,500 years,² and its harmful effects on human health are widely known. The Centers for Disease Control states that no level of lead exposure is safe for humans.³ That is why lead has been removed from various paints, gasoline, pipes and a host of other products over the years. Yet lead exposure through hunting ammunition and tackle continues to pose a threat to human health. Top researchers, medical professionals, and environmental scientists state that leadbased ammunition is the "greatest, largely unregulated source of lead knowingly discharged into the environment in the United States."⁴

Although the effects of lead exposure are potentially concerning for all humans, young children are most at risk. Lead's negative impacts on children can include irreversible damage to the brain and nervous system, behavioral problems, anemia, liver and kidney damage, hearing loss, hyperactivity, developmental delays and, in extreme cases, death.⁵

Consuming meat from animals killed with lead ammunition needlessly puts people at risk of lead exposure.⁶ Lead ammunition is highly fragmentable and nearly impossible to remove completely from meat.⁷ Lead fragments can be found as far as 18 inches from the bullet wound channel.⁸ Lead fragments in game meat include not only larger, visible pieces, but also nanoparticles invisible to the naked eye.⁹ It is for these reasons that game meat, a common dietary staple for many families throughout the United States, can substantially raise lead levels in humans.^{10,11} It is therefore advised that people not eat wild animals shot with lead ammunition in order to avoid possible lead exposure. For the safety of families in need, game meat donated to charitable organizations should not be shot with lead ammunition and should not be processed in facilities that may have lead contamination from other wild-killed animals.¹²

Some states recognize the threat posed by lead-contaminated game meat. North Dakota advises food pantries not to distribute or use donated ground venison due to contamination from lead fragments.¹³ The Minnesota Department of Health recommends that pregnant women and children younger than six not eat venison harvested with lead ammunition.¹⁴ Others advise the use of non-lead ammunition to prevent lead exposure from processed venison.¹⁵



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2. Lead is highly toxic to wildlife

More than 130 species of wild animals have been documented as suffering the effects of lead poisoning from spent lead ammunition and fishing tackle. Animals are exposed to lead in various ways, including foraging spent lead shot from the ground, feeding on lead-tainted gut piles, scavenging carcasses of animals shot with lead ammunition and left behind, or directly consuming spent fishing tackle.¹⁶

Lead poisoning is one of the leading causes of death for bald eagles. Scientists have known for decades that bald eagles can be poisoned by exposure to lead, that poisoned birds ingest lead ammunition fragments, and that lead exposure in bald eagles is associated with hunting seasons when they are more likely to scavenge on lead-tainted gut piles left behind by hunters or the carcasses of animals that hunters shoot but don't recover. The toxicological effects of lead on bald eagles and other scavening birds are grave and well-established.¹⁷ In birds, a single ingested shotgun pellet or bullet fragment is sufficient to cause brain damage, impairing critical neuromuscular, auditory, and visual responses.¹⁸ Poisoned animals who survive often experience long-term negative effects that make them more susceptible to predation and dangers such as car collisions.¹⁹

A recent study found that nearly half of eagles tested in the U.S.—46% of bald and 47% of golden eagles—showed signs of chronic lead poisoning.²⁰ In 2020 the U.S. Fish and Wildlife Service (FWS) estimated a total population of 316,700 bald eagles in the U.S.,²¹ so lead poisoning could be jeopardizing as many as 145,683 bald eagles. The FWS also notes that lead poisoning from spent ammunition is the primary cause of death for the California condor, a species the Service estimates numbers only 347 individuals in the wild.²²

Other research finds that lead exposure increases in female black bears with the number of big game animals hunted by humans in the vicinity, and increases with age in both female and male black bears.²³ Scavenging carcasses of moose killed by human hunters likely also exposes black bears, brown bears, ravens, golden eagles and bald eagles to lead.²⁴

3. Effective alternatives to lead ammunition are available

The availability,²⁵ performance and affordability of non-lead ammunition have never been greater than today. For example, FWS has approved more than a dozen nontoxic shot types for hunting waterfowl. The increased supply has led the price of non-lead shot to fall since lead shot was banned federally for waterfowl hunting in 1991. California's landmark decision in 2013 to become the first state to require non-lead ammunition for taking of any wildlife in the state also spurred the production and availability of non-lead bullets.²⁶ A survey conducted by the Arizona Game and Fish Department revealed that nearly 80% of hunters rated the performance of non-toxic ammunition to be better than or equivalent to its lead counterpart.²⁷ And the Texas Parks and Wildlife Department released a multi-year, peer-reviewed study in 2015 concluding that dove hunters using shotshells loaded with lead pellets achieved no advantage in effectiveness over those using shotshells firing non-toxic steel pellets of similar or slightly larger size.²⁸



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4. Conclusion

Because of the broad health risks that lead poses to people and animals, and the efficacy and availability of non-lead shot and tackle for hunters and anglers nationwide, Humane World for Animals reiterates its support for SB 634 to phase out the use of highly toxic lead ammunition in Maryland. Thank you.

Stacey Volodin Maryland State Director svolodin@humanesociety.org

https://pubmed.ncbi.nlm.nih.gov/27966171/

¹ Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention. 2011. Lead CAS ID #: 7439-92-1. <u>https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=22</u>

² Eisler, R. 1988. Lead hazards to fish, wildlife, and invertebrates: a synoptic review. United States Fish and Wildlife Service. Biological Report 85.

³ Centers for Disease Control and Prevention. 2013. Lead Factsheet. National Biomonitoring Program.

http://www.cdc.gov/biomonitoring/Lead_FactSheet.html

⁴ D. Bellinger, et al. 2013. Health Risks from Lead-Based Ammunition in the Environment – A Consensus Statement of Scientists. Microbiology and Environmental Toxicology, UC Santa Cruz. <u>http://escholarship.org/uc/item/6dq3h64x</u>.

⁵ Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention. 2016. Lead Toxicity, What Are the Physiologic Effects of Lead Exposure?

https://www.atsdr.cdc.gov/csem/lead/docs/CSEMLead_toxicity_508.pdf

⁶ Pain, D. J., et al. 2010. Potential hazard to human health from exposure to fragments of lead bullets and shot in the tissues of game animals. PLoS One, 5(4), e10315.

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0010315 7 U.S.

National Park Service. 2011. Lead Bullet Risks for Humans & Wildlife.

https://www.nps.gov/pinn/learn/nature/leadinfo.htm

⁸ Minnesota Department of Natural Resources. Examining Variability Associated with Bullet Fragmentation and

Deposition in White-tailed Deer and Domestic Sheep. <u>http://www.dnr.state.mn.us/hunting/lead/short-summary.html</u> ⁹ Kollander, B. et al (2016). Detection of lead nanoparticles in game meat by single particle ICP-MS following use of lead-containing bullets. Analytical and Bioanalytical Chemistry, 409(7), 1877-1885.

¹⁰ W. Cornatzer et al. 2007. Qualitative and quantitative detection of lead bullet fragments in random venison packages donated to the Community Action Food Centers of North Dakota. Ingestion of Lead from Spent Ammunition: Implications for Wildlife and Humans. The Peregrine Fund, Boise, Idaho, USA. DOI:10.4080/ilsa.2009.011 https://science.peregrinefund.org/legacy-sites/conferencelead/PDF/0111%20Cornatzer.pdf





Formerly called the Humane Society of the United States and Humane Society International

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Environmental Research, 109(8), 952-959. DOI:10.1016/j.envres.2009.08.007 <u>https://pubmed.ncbi.nlm.nih.gov/19747676/</u>
¹² W. Cornatzer et al. Supra note 10.

¹³ North Dakota Department of Health. Lead in Venison. <u>https://www.ndhealth.gov/lead/venison/</u>
¹⁴ Minnesota Department of Health. 2008. Information about lead in venison.

https://www.health.state.mn.us/communities/environment/lead/docs/leadinvenison.pdf ¹⁵ Illinois

Department of Public Health. Environmental Health Fact Sheet, Lead in Venison.

<u>http://www.idph.state.il.us/envhealth/factsheets/lead-in-venison.htm;</u> Michigan Department of Natural Resources. Precaution About Lead in Venison. <u>https://www.michigan.gov/dnr/managing-resources/Wildlife/deer/precautionabout-lead-in-venison;</u> Wisconsin Department of Natural Resources. Lead Information for Hunters, Consumers and Meat Processors. <u>https://p.widencdn.net/ryibuw/lead</u>

¹⁶ Tranel, M. A. et al 2009. Impacts of lead ammunition on wildlife, the environment, and human health—A literature review and implications for Minnesota. In R. T. Watson, M. Fuller, M. Pokras, and W. G. Hunt (Eds.). Ingestion of Lead from Spent Ammunition: Implications for Wildlife and Humans. The Peregrine Fund, Boise, Idaho, USA. DOI

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¹⁷ Golden, et al. (2016). A review and assessment of spent lead ammunition and its exposure and effects to scavenging birds in the United States. In Reviews of Environmental Contamination and Toxicology Volume 237 (pp. 123–191). Springer International Publishing. <u>https://link.springer.com/chapter/10.1007/978-3-319-23573-8_6</u> ¹⁸ S.M. Haig, et al. Supra note 16.

¹⁹ Scheuhammer, A.M. et al 1996. The ecotoxicology of lead shot and lead fishing weights. Ecotoxicology 5, 279–295. <u>https://pubmed.ncbi.nlm.nih.gov/24193869/</u>

²⁰ Vincent A. Slabe et al., Demographic implications of lead poisoning for eagles across North America. Science 375,779-782(2022). DOI:10.1126/science.abj3068

²¹ U.S. Fish and Wildlife Service. 2020. Final Report: Bald Eagle Population Size: 2020 Update. U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Washington, D.C. U.S.A.

https://www.fws.gov/sites/default/files/documents/2020-bald-eagle-population-size-report.pdf

²² The U.S. Fish & Wildlife Service: California Condor. <u>https://www.fws.gov/species/california-condor-gymnogypscalifornianus;</u> California Condor Recovery Program at <u>https://fws.gov/program/california-condor-recovery</u>. ²³ Brown L et al. Lead exposure in American black bears increases with age and big game harvest density. Environ Pollut 2022 Dec 15;315:120427. DOI: 10.1016/j.envpol.2022.120427. Epub 2022 Oct 13. PMID: 36243189.

²⁴ Brown L et al. Lead exposure in brown bears is linked to environmental levels and the distribution of moose kills. Sci Total Environ. 2023 May 15;873:162099. DOI: 10.1016/j.scitotenv.2023.162099. Epub 2023 Feb 9. PMID: 36764533; Legagneux P et al. High risk of lead contamination for scavengers in an area with high moose hunting success. PLoS One. 2014 Nov 12;9(11):e111546. DOI: 10.1371/journal.pone.0111546. PMID: 25389754; PMCID: PMC4229082.

²⁵ Thomas, V. G. (2014, July). Availability and Use of Nonlead Rifle Cartridges and Nontoxic Shot for Hunting in California, with Reference to Regulations used in Various Jurisdictions & Survey of California Ammunition Retailers to Assess Availability of Nonlead Ammunition.

https://ca.audubon.org/sites/default/files/documents/ab711_report_final_vernon_thomas_jul_28.pdf

²⁶ Press release, December 2013: Liberty Ammunition Increases Planned Production. <u>https://www.officer.com/home/press-release/11268175/liberty-ammunition-increases-plannedproduction</u>

²⁷ D.J. Case & Associates. (2006). Non-lead Ammunition Program Hunter Survey. In Final report to the Arizona Game & Fish Department. Washington, D.C.: Association of Fish and Wildlife Agencies.

²⁸ Pierce, B. L., et al. (2015). A comparison of lead and steel shot loads for harvesting mourning doves. Wildlife Society Bulletin, 39(1), 103-115; Gremse, F., et al. (2014)

https://wildlife.onlinelibrary.wiley.com/doi/epdf/10.1002/wsb.504; Performance of lead-free versus lead-based hunting ammunition in ballistic soap. PloS one, 9(7), e102015 https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0102015; Trinogga, A., Fritsch, G., et al. (2013). Are lead-free hunting rifle bullets as effective at killing wildlife as conventional lead bullets? A comparison based on wound size and morphology. Science of the Total Environment, 443, 226-232 https://www.sciencedirect.com/science/article/pii/S0048969712013848.

Support of SB 634 - Earthjustice.pdf Uploaded by: Susan Miller

Position: FAV



March 4, 2025

Chair Brian J. Feldman Members of the Senate Education, Energy, and the Environment Committee

Re: Earthjustice support of SB 634: Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management

Earthjustice¹ strongly supports the passage of SB 634, which would require the Department of Natural Resources to adopt regulations requiring the use of nonlead ammunition for all hunting by July 1, 2029, along with earlier nonlead requirements for hunting certain species. This bill represents a vital, common-sense measure to protect people and wildlife from the unnecessary harm posed by hunting with lead ammunition while maintaining the full range of existing hunting opportunities available to the public.

Ingestion of residual lead ammunition from hunting is the primary source of lead poisoning of birds and other wildlife, which injures or kills millions of birds each year.² Lead poisoning harms numerous species, and particularly severe impacts have been documented for certain of them, including waterfowl and bald and golden eagles.³ For example, a major 2022 study in the journal *Science* found that nearly half the dead bald and golden eagles tested nationwide had lead levels indicating chronic lead poisoning and the observed rates of lead poisoning were sufficient to significantly slow both species' rate of recovery from near extinction.⁴ While lead poisoning can kill birds immediately, it also causes lasting, potentially fatal damage even when not immediately lethal.

Hunting with lead ammunition also harms people. Lead fragments can be found in wild game meat despite best attempts to remove sections surrounding a bullet wound.⁵ And studies have found that eating game shot with lead ammunition is associated with increased levels of lead in the human body—a clear danger given the well-known harmful impacts of lead on human health.⁶

BIODIVERSITY DEFENSE PROGRAM 50 CALIFORNIA STREET, SUITE 500 SAN FRANCISCO, CA 94111

¹ Earthjustice is a non-profit public interest environmental law organization that represents other non-profits free of charge. Earthjustice uses the power of law and the strength of partnerships to advance clean energy, combat climate change, protect people's health and preserve magnificent places and wildlife.

² Deborah J. Pain, et al., *Effects of lead from ammunition on birds and other wildlife: A review and update*, 48 Ambio 935–953 (2019), <u>https://doi.org/10.1007/s13280-019-01159-0</u>. ("Pain et al. (2019")

³ Pain et al., (2019); U.S. Fish & Wildlife Serv., 2022–2023 Station-Specific Hunting and Sport Fishing Regulations, 87 Fed. Reg. 57108 (Sept. 16, 2022), <u>https://www.federalregister.gov/documents/2022/09/16/2022-20078/2022-</u>2023-station-specific-hunting-and-sport-fishing-regulations

⁴ Vincent A. Slabe, et al., *Demographic implications of lead poisoning for eagles across North America*, 375 Science 779–782 (2022), <u>https://www.science.org/doi/10.1126/science.abj3068</u>, ("Slabe (2022)").

⁵ National Park Service, *Lead Bullet Risks for Wildlife & Humans*, Pinnacles National Park, <u>https://www.nps.gov/pinn/learn/nature/leadinfo.htm</u>.

⁶ Eric J. Buenz, *Lead Exposure Through Eating Wild Game*, American Journal of Medicine, 129(5): 457-58 (May 2016), <u>https://www.amjmed.com/article/S0002-9343(16)30021-3/fulltext</u>; David Bellinger, et. al., *Health Risks from Lead-Based Ammunition in the Environment - A Consensus Statement of Scientists* (2013), https://www.biologicaldiversity.org/campaigns/get_the_lead_out/pdfs/Scientists_Heatth_Impacts_letter_3-13.pdf.

Thankfully, these are avoidable problems. Non-lead ammunition is widely available, just as effective, and comparably or even lower priced than premium lead ammunition. A 2013 study found that lead-free ammunition is available in the United States in "all of the common and lesscommon rifle calibers," and found "no major difference" in the price of lead-free and lead-core ammunition for most popular calibers.⁷ The Maine Department of Inland Fisheries and Wildlife notes on its website that the overall price differential between lead and non-lead ammunition is less than \$10 per year for a typical hunter and lead-free ammunition is available in "a large array of calibers, weights and designs that meet or exceed the performance of their lead counterparts."8 Studies confirm that non-lead ammunition is just as effective as lead ammunition for hunting, while avoiding harm to non-target animals and producing game meat that is much safer for people to eat.⁹ Given the comparable price, wide availability, and equivalent effectiveness of non-lead ammunition, it is not surprising that the U.S. Fish and Wildlife Service has observed no declines in hunting attributable to phasing out lead ammunition on the federal lands where lead ammunition is now prohibited.¹⁰ In sum, requiring the use of nonlead ammunition solves a serious wildlife conservation problem while maintaining Maryland's traditional hunting opportunities.

SB 634 thus represents a crucial, common-sense step to protect people and wildlife from the harmful effects of lead ammunition. Earthjustice strongly supports its passage.

Respectfully submitted,

Suson Stevens Milly

Susan Stevens Miller Senior Attorney Earthjustice

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3758820/.

⁸ Maine Department of Inland Fisheries and Wildlife, "Hunting with Nonlead Ammunition,"

⁷ Vernon G. Thomas, *Lead-Free Hunting Rifle Ammunition: Product Availability, Price, Effectiveness, and Role in Global Wildlife Conservation*, Ambio 42(6):737-45 (October 2013),

https://www.maine.gov/ifw/hunting-trapping/hunting/nonlead-ammunition.html#effectiveness.

⁹ See, e.g., Anna Trinogga, et al., *Are lead-free hunting rifle bullets as effective at killing wildlife as conventional lead bullets? A comparison based on wound size and morphology*, Science of The Total Environment 443: 226–232 (January 2013), <u>https://www.sciencedirect.com/science/article/pii/S0048969712013848</u>.

¹⁰ U.S. Fish & Wildlife Serv., 2022–2023 Station-Specific Hunting and Sport Fishing Regulations, 87 Fed. Reg. 57108 (Sept. 16, 2022), <u>https://www.federalregister.gov/documents/2022/09/16/2022-20078/2022-2023-station-specific-hunting-and-sport-fishing-regulations</u>.

Suzanne testimony.pdf Uploaded by: Suzanne Shoemaker Position: FAV

Date: March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 – Hunting – Nonlead Ammunition, et cet. – FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

I am a Licensed Master Wildlife Rehabilitator and Founder, President, and Executive Director of Owl Moon Raptor Center, founded in 2002 and located in Boyds, Maryland. Owl Moon Raptor Center's mission is to preserve and increase native populations of birds of prey through 1) rescue, rehabilitation, and release; 2) habitat protection, enhancement, and expansion; and 3) public education. Owl Moon Raptor Center strongly supports HB 471 phasing out lead or lead-based ammunition for hunting. Owl Moon admits over 600 sick or injured birds of prey into the center annually, with the goal of rehabilitating and returning them to the wild. Unfortunately, not all birds are able to be rehabilitated and over the years, we have seen many raptors come in suffering from the ill and often irreversible effects of lead poisoning. We see birds exhibiting signs of lead poisoning including depressed behavior, tremors and seizures, difficulty breathing and swallowing food, muscle weakness, dehydration, and liver and kidney damage leading to death. While there are treatments that can remove lead from the blood, rarely is this treatment successful in reversing the symptoms, and rarely can a bird with toxic levels of lead in their blood be saved. Lead toxicosis {poisoning} is a heartbreaking scenario to witness, and unfortunately, we witness it several times each year, primarily in Bald Eagles and Vultures (both Turkey and Black), but also in other raptors such as Red-tailed Hawks, Red-shouldered Hawks, Great Horned Owls, and water birds such as Great Blue Herons.

Based on testing in recent years, the majority of Bald Eagles and Vultures that Owl Moon receives into care have a measurable level of lead in their blood. This year, ALL of the Bald Eagles tested had lead in their blood. Wild raptors consume lead in the carcasses and gut piles left by deer hunters, and in other wild game and fish that have consumed lead or been shot. Wild raptors can also become toxic from lead ammunition in their bodies from being illegally shot. Research shows that any level of lead in the system will compromise the long-term health of a wild raptor, and the body cannot remove lead on its own. Thus, these birds, including eagles, vultures and most other birds of prey, will be increasingly unhealthy and in harm's way as the lead in their blood accumulates during their lifetimes.

The Chesapeake Bay Region is a treasured outdoor recreation area for hunters and fisherman, birdwatchers and photographers, and other nature enthusiasts. The Bay and its tributaries are currently home to water birds of all kinds, and to a robust Bald Eagle population, as well as a large population of White-tailed deer. Maryland's Eastern Shore and

Southern Maryland contain numerous hunting reserves, state parks, and other areas frequented by hunters during deer season. Having these two interests occur together should not unintentionally endanger predatory birds including the national symbol of our country.

Due to expense and other factors, not all birds admitted at Owl Moon Raptor Center are tested, but of the birds we have on record since we first began testing symptomatic patients in 2016, Owl Moon has admitted birds of prey, including 20 Bald Eagles, suspected of lead toxicosis. Of those, 18 were confirmed to have toxic lead levels by blood testing. Only one of the birds, a Red-tailed Hawk, diagnosed with lead toxicity survived and was released. The rest either died or were humanely euthanized due to severity of symptoms. All 18 that died were Bald Eagles. The majority of birds that are admitted with the severe symptoms of lead toxicity consume the lead while feeding on a carcass or gut pile that contains lead fragments, as evidenced by radiographs showing high density pellets or other lead ammunition in their stomach and/or intestines. Less commonly, radiographs of birds with symptoms of lead toxicity show lead ammunition in other parts of their bodies where the lead is being absorbed into their blood, such as in close proximity to joints in their limbs. These birds did not consume the lead but were illegally shot. Every year Owl Moon admits several raptors that were illegally shot. Our records show that since January 2014, we have admitted at least 35 raptors that were illegally shot by citizens. Of these, most suffered severe traumatic injuries rather than lead toxicity, but some had elevated lead levels in their blood and were symptomatic. Evidence shows that even slightly elevated blood lead can weaken a bird, and compromise its immune system. This would reduce a bird's chances of rehabilitation and a successful return to the wild.

I sincerely hope that the information contained in this letter will help the reader to conclude, as we do, that lead ammunition is a serious threat to the health of our wild bird populations, especially raptors, including our native Black and Turkey Vultures and Bald Eagles, but also other creatures, including humans, that consume deer meat and gut piles, or are shot. With all the alternatives to lead ammunition currently being manufactured, there is no good reason to keep exposing ourselves and our native wildlife to the risks of lead in our environment. Thank you for reading this, and please support HB 471 phasing out lead or lead-based ammunition for hunting.

Sincerely,

man Min

Suzanne Shoemaker, Executive Director Owl Moon Raptor Center, Inc 20201 Bucklodge Road Boyds, MD 20841 (301) 353-8947 (w) (301) 908-7249 (m) owlmoonrc@gmail.com

Ted Williams Updated Testimony.pdf Uploaded by: Ted Williams Position: FAV

March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 - Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

My name is Ted Williams. As a full-time freelance writer for the last half century, I've written exclusively about fish and wildlife for national publications such as *Outdoor Life, Audubon, Sierra, National Wildlife, Smithsonian, Modern Maturity, Yankee,* and *Slate.* I'm a life-long hunter and own a dozen guns. As a former information officer for the Massachusetts Division of Fisheries and Wildlife, I worked closely with my fellow hunters. I continue to work with them.

It baffles me why so many of my fellow hunters insist on poisoning wildlife (including their game), themselves, their children, their wives and their friends when they can use non-toxic copper bullets which perform better and cost something like \$2 more per box of 20 than lead. The added expense amounts to roughly the cost of a cup of coffee per hunting season.

Any Maryland hunter who fires significantly more than 20 rounds at deer in a season needs to brush up on his marksmanship because Maryland hunters are allowed only two whitetails a season in Region A, 3 whitetails a season in Region B, and two nonnative, invasive sika deer.

The claim I've been hearing from lead defenders that squirrel hunters can't buy non-toxic .22 rimfire ammo is patently false. It is now readily available and, like higher caliber non-toxic ammo, only marginally more expensive. What's more, tests by the Wildlife Society show that it performs as well or better than lead. (https://wildlife.onlinelibrary.wiley.com/doi/full/10.1002/wsb.1255)

Any squirrel hunter who complains that he can't find non-toxic .22 rimfire ammo hasn't looked for it recently. Readily available non-toxic .22 rimfire products include: Norma ECO Speed-2, CCI® TNT® Green .22 WMR 30 Grain Lead-Free Rimfire Ammo, and Hornady Varmint Express Rimfire 17HMR 15.5 Grain Nontoxic.

The cost difference between traditional lead .22 rimfire ammo and non-lead .22 rimfire ammo can vary depending on the brand and type of ammunition. Generally, non-lead (copper or other metal) ammo tends to be only slightly more expensive than traditional lead ammo. For example, a box of traditional lead .22 long-rifle ammo might cost around \$10-\$15 for 50 rounds, while non-lead .22 LR ammo could range from \$15-\$25 for the same quantity. An avid squirrel hunter might fire 70 rounds a season. The added cost might amount to something like the cost of a Big Mac, fries and a drink.

I have also heard complaints from hunters who use flintlocks about nonavailability of non-toxic ammo. I salute these hunters for sportily handicapping themselves with ancient, single-shot, muzzle-loading flintlock rifles. I would venture that there are no more than half a dozen flintlock hunters in Maryland. I salute them all. But they also haven't looked recently for non-toxic ammo. It also is readily available. Any non-antique firearm can safely shoot non-toxic rounds.

Here are just two of many sources: TomBob Outdoors ITX Lead-Free Muzzleloading Round Balls. These round balls are made from materials with no significant traces of lead. They are available in various calibers, including .32, .45, .50, .54, and .60. Another option is Barnes VOR-TX ammunition, which is made from a full copper alloy and is available in multiple calibers. These slugs are known for their high ballistic coefficient, clean-burning properties, and deep penetration.

Defenders of lead bullets allege ruinous cost of copper, invariably comparing, say, the most expensive .308 168-grain copper rounds with old, cheap lead ones like Core Lokt or Power Point. But when you compare like products today, prices are comparable. Copper ammunition costs something like \$1.50 more per box of 20 rounds compared to premium lead.

So, for the average hunter, non-toxic ammo might cost about the price of two cups of coffee a season. A sub-par marksman might have to suffer the price of three coffees, a poor marksman maybe four.

In its program "Sportsmen Against Hunger" the Safari Club donates deer its members kill to the needy. Acting on data collected by University of North Dakota medical professor and Safari Club member Dr. William Cornatzer, the health departments of North Dakota and Minnesota impounded 17,000 pounds of donated, lead-impregnated venison. Iowa requires this warning label on venison donated by hunters in the "Help Us Stop Hunger" program: "Lead fragments may be found in processed venison. Children under 6 years and pregnant women are at the greatest risk from lead."

The Wisconsin Department of Health Services recommends "the use of non-lead ammunition as the simplest and most effective solution to lead poisoning, in both humans and wildlife, arising from the consumption of deer killed with lead ammunition."

The U.S. Department of Agriculture certifies commercial meat lockers. But neither it nor the Food and Drug Administration regulates lead in donated venison.

The CDC reports: "No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to negatively affect a child's intelligence, ability to pay attention, and academic achievement."

I polled the most hardcore big-game hunters I know. They serve with me on the Outdoor Writers of America Association's Circle of Chiefs. A few of their comments:

Jim Low: "I've been hunting whitetails exclusively with copper bullets -- centerfire and muzzleloader -- for about 15 years and have nothing but praise. Highly accurate, sturdy, excellent expansion and weight retention."

Matt Miller: "I have found copper superior in every way in my hunting for mule deer, whitetail, pronghorn and feral hog."

Scott Stouder: "Nothing but stellar performance and the knowledge that I'm not killing others out there from magpies to eagles."

Larry Stone: "Accurate, hard-hitting, and no fragmentation."

Mike Furtman: "As I hunted deer today, I sat within sight of the gut pile from the doe I killed two days ago. Much of it had been eaten already, but what remained was dined upon by two bald eagles, three ravens, two pileated woodpeckers, one hairy woodpecker, several blue jays, and numerous chickadees and nuthatches. Which is why I switched to copper bullets."

Ammo companies developed copper bullets not to protect wildlife or humans, but to kill game more effectively than lead bullets. They do. Hunters have known this for years. In 2012 *American Hunter*, the official publication of the National Rifle Association, selected the Barnes VOR-TX copper bullet for its "Ammunition Product of the Year Award." And *American Hunter* field editor Bryce Towsley writes that the Barnes all-copper X-Bullet "redefines what we think we know about hunting projectiles." And in a good way: "I have lost count of the game I have taken with Barnes X-Bullets in various configurations."

The North American Non-Lead Partnership -- committed to protecting wildlife from poisoning by lead bullets -- includes 46 partners, all of which represent hunters -- members like The Peregrine Fund (founded by hunters using falcons), Midwest and Northeastern Associations of Fish Wildlife Agencies, Arizona Game and Fish Department, Oregon Hunters Association, Arizona Elk Society, Wisconsin Sharp-tailed Grouse Society, and Arizona Wild Turkey Federation.

The Partnership sponsors demonstrations in which copper and lead bullets are fired into plastic bags filled with water and housed in plastic drums. Slugs and fragments fall to the bottom of the drums. In one typical demo, hosted by Allen Zufelt of the Arizona Game and Fish Department and Partnership co-founder Chris Parish, Zufelt fires a Federal Nosler AccuBond 180-grain lead bullet, then a 180grain Federal Trophy Copper bullet. Parish retrieves and weighs the two mushroomed slugs. The copper slug weighs 179.9 grains. The lead slug weighs 137.5 grains, having shed and scattered 42.5 grains of fragments.

The toxicity of lead hunting projectiles is ancient news. George Bird Grinnell published this warning in his sporting weekly *Forest & Stream*: "Until they reach the gizzard where the wildfowl grinds his food, these pellets do no harm, but, when reduced to powder...they become a violent poison." The year was 1894.

Here are links to some of my other pieces on the poisoning of wildlife with lead bullets (and fishing tackle):

https://www.landcan.org/landcan-blog/Poison-Bullets/349

https://www.hcn.org/wotr/let-them-eat-copper/

https://blog.nature.org/2016/11/28/recovery-saving-common-loon-lead-fishingtackle-poisoning-birds/

Wayne Pacelle Testimony MD SB634.pdf Uploaded by: Wayne Pacelle

Position: FAV





March 4, 2025

The Honorable Brian Feldman, Chair Senate Education, Energy & Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401

Re: SB 634 - Hunting - Nonlead Ammunition, et cet. - FAVORABLE

Dear Chairman Feldman, Vice Chair Kagan, and Members of the Committee:

On behalf of Animal Wellness Action, the Animal Wellness Foundation, and the Bethesda-based Center for a Humane Economy, I write in support of SB 634, sponsored by Delegate Nick Allen, to phase out the use of poisonous lead ammunition in sport hunting.

With an atomic number of 82, lead has had its poisonous characteristics on display for more than 2,000 years. Its intrusion into the body has the potential to diminish the function of every organ in the body, but it is best known for its effects on the brain and cognitive function. According to one peer-reviewed study published in 2022 in the Proceedings of the National Academy of Sciences, exposure to leaded gasoline lowered the IQ of about half the population of the United States, focusing on people born before 1996 — the year the U.S. banned gas containing lead.

"Within the brain, lead-induced damage. . .can lead to a variety of neurological disorders, such as brain damage, mental retardation, behavioral problems, nerve damage, and possibly Alzheimer's disease, Parkinson's disease, and schizophrenia," <u>according to the National Institutes of Health</u>.

Because of the extreme threat to public health, the U.S. removed lead from toys to furniture to house paint to gasoline (with that transition completed finally in 1996). With safer, affordable, and high-performance alternatives to lead ammunition available, it's time to embrace superior forms of ammunition. The U.S. Army has shifted away from lead, with all of its detriments, and is now using tungsten, copper, steel, and other elements and alloys for its small arms ammunition. The change from lead to tungsten will also be "invisible" to the user, said John Middleton, technical executive for Environmental Armament Technology at U.S. Army Operations Support Command in Rock Island, Ill. "It is a seamless change," he said," putting to rest any question about the killing potential of other elements used for ammunition.

We know that lead poisons and kills millions of wild animals every year. It also puts millions of hunters and their friends and families at risk. In weighing the inestimable costs of the loss of human life, and the lingering, painful deaths of countless thousands of animals, are we indeed serious about comparing those existential public and animal health consequences with the minor incremental cost of non-toxic ammunition (< \$1 to \$10/year for the average hunter) that is now widely available and regularly purchased on-line and delivered to our doorsteps.

And when we add up the other costs that hunters bear to pursue their passion for hunting – the costs of licensing, clothing, hunting equipment, transportation, processing of game meat, and, in many cases,

leasing of private lands, the incremental ammunition costs are negligible. Ammunition is one of the least costly aspects of the hunt, and it will remain that way after SB 634 is enacted.

As demand increases, as it's been for non-toxic ammunition, cost differences between lead and non-lead ammunition are likely to evaporate, given the wide underlying low costs of mining and manufacturing these other metals. We saw that with the ban on lead ammunition in waterfowl hunting, which was imposed in 1991 (34 years ago) and fought vigorously by the NRA, the Safari Club, and some of the other groups assembled here. That switch-over to lead is now considered one of the great conservation success stories of the 20th century, sparing the poisoning of 1.4 million mallards (just one of dozens of bird species) spared lead poisoning every year. Waterfowl hunting is more robust, and duck and goose hunters see larger flights of birds because millions of the birds don't die miserable deaths from poisoning.

To look at it through a different lens, let's remember that California began to phase in its lead ammunition ban in 2015 and completed it in 2019. A year before the ban began to be implemented, California sold 284,759 hunting licenses; the year after the ban took effect, it sold 286,276 licenses – an increase of 1500 licenses in a state that had been seeing a steady annual decline in hunting participation for decades, just as we've seen in many states.

If arsenic or polonium or mercury or plutonium were abundant metals and if they had the right weight and ballistic properties for good ammunition, would we ever think about equipping hunters with any one of those elements and allowing them to go afield with them and then allow them to consume the game they kill with it?

There is no level of lead considered safe, and it is impossible to cleanse the carcass of lead, which fragments on its way to the target and disperses even more widely when it hits the target. The two federal agencies -- the U.S. Food and Drug Administration and the USDA -- responsible for assuring food safety rules, would never let a lead-inflected carcass into the food supply were it to pass through their screening systems. Even the Maryland Hunting and Trapping Guide warns hunters about the toxic effects of lead in the carcasses of the animals they shoot with lead.

In Maryland, the situation is worse than ever because of the growth in deer hunting. Deer kills increased by 270% from 1989-2023 (from 34,000 to 85,000 deer); even after adjusting for deer taken with archery equipment or copper bullets, it's estimated that more than 60,000 lead-contaminated gut piles litter the state, threatening wildlife and hunting families relying on game meat.

- Over 500 studies are definitive in documenting risk to 134 species (including humans), <u>according</u> to the National Park Service. Animals consume spent lead ammunition or fishing tackle by foraging from the ground, feeding on the remains of lead-contaminated carcasses, or ingesting lead sinkers and jigs.
- A <u>2022 study</u> in Science examined 1,210 bald and golden eagles across 38 states and found that nearly half of them had "bone lead concentrations above thresholds for chronic poisoning." Wildlife rehabilitation facilities take in an unyielding stream of lead-poisoned hawks, ravens, turkey vultures, and mourning doves.
- Fragments of lead are nearly impossible to remove from meat, even with professional processing. <u>One study</u> showed "all [deer] carcasses showed metal fragments" with risk to "ten million hunters, their families, and low-income beneficiaries of venison." Hunting writer Ted Williams <u>noted in the outdoor publication *Hatch*</u>, two "health departments impounded 17,000 pounds of donated, lead-impregnated venison."

• In October 2023, the U.S. Fish and Wildlife Service (USFWS) published a <u>final rule</u> relating to hunting on wildlife refuges and concluded that lead is an unmistakable threat to wildlife and to hunting family and friends. The rule noted that "lead ammunition, including bonded lead ammunition, fragments when it hits an animal, and this distributes tiny pieces of lead within a wide radius in the soft tissues of the harvested animal...These tiny fragments of lead are then consumed by humans eating the game meat and scavenger species eating carcasses or gut piles left behind. In this tiny, fragmented form and acted on by digestive enzymes and acids, the lead derived from ammunition can then shed particles that enter the blood stream and affect systems throughout the body, presenting both chronic and acute health risks."

Lead phase-outs work, and alternative ammo available and cost-effective.

- Nationwide, millions of hunters already use alternative forms of ammunition, that these forms of ammo are widely accepted by state and federal wildlife agencies and are widely recognized as having equal or superior killing power. In a <u>survey</u> by the Arizona Game and Fish Department, 93.1% of hunters said the overall performance of non-toxic ammo was equal or superior to lead; 89.1% said they would use it again.
- The Texas Parks and Wildlife Department released a peer-reviewed <u>study</u> in 2015 comparing lead and steel shot loads in dove hunting. The researchers found "no relationship between ammunition type and level of hunter satisfaction" and "no difference in doves bagged per shot, wounded per shot, bagged per hit, or wounded per hit among the 3 ammunition types."
- Lead alternatives such as steel, copper, and bismuth are widely available, and often cheaper than premium lead.

For the benefit of wildlife and hunting families, we want to see lead use ended tomorrow. Alternatives are already abundant in the marketplace. But SB 634 is an effort by our community to bend over backwards to accommodate players in the hunting camp. It is a product of compromise. We worked over months with the DNR and key leaders in the hunting community on a long-term phase-out, with deer, squirrel and rabbit hunting restrictions not to take effect until 2029.

All prior debates about balancing public health and safety against costs to consumers and industry for commercial uses of lead have been settled in favor of public health. SB 634 is a no-brainer that does something good for hunting, wildlife, and for wildlife conservation.

Sincerely,

Wayne Pacelle President Animal Wellness Action
MAWC Opposing SB 634.pdf Uploaded by: Crystal Brumme Pickett

Position: FWA



February 28, 2025

TO: The Maryland Senate Education, Energy & the Environment Committee

BILL: SB 634 "Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management"

POSITION: Unfavorable

The Maryland Association for Wildlife Conservation is the umbrella organization for all the foxchasing groups in Maryland.

MAWC is not opposed to the elimination of the exemption of foxchasing in the definition of hunting; in fact, MAWC welcomes the opportunity to be included in Maryland's "Right to Hunt" statutes.

However, all of the Maryland statutes pertaining to hunting are based on the premise *of an individual with a weapon*; foxchasing is predicated on a pack of hounds managed by a team of people followed by a group of spectators. Undoubtedly, there will be unintended consequences and complications when *those in an unarmed group activity are treated the same as an armed individual*. (Please see page 2 for a more detailed explanation.)

For this reason, we respectfully oppose HB741/SB634, as more in-depth research into existing statutes needs to be conducted *prior to codifying* foxchasing in the definition of hunting, so that we can be more artful in how we weave foxchasing into the existing hunting statutes and the subsequent regulations.

MAWC welcomes the opportunity to work with the sponsors to do a more thorough examination of the statues and the related regulations, with the objective to re-introduce a better bill in a future legislative session.

Sincerely,

Crystal Brumme Pickett, vice president Maryland Association of Wildlife Conservation <u>CrystalBrummePickett@comcast.net</u> 410-707-3678



"HUNTING" and "FOXCHASING"

OBJECTIVES

In the hunting of deer, duck, goose, rabbit and other game, the hunter, using a weapon, seeks to "reduce ...(the) bird or mammal to personal possession."

In the chasing of fox with a pack of hounds, the team seeks only to find and pursue, not to "reduce to personal possession."

METHODS

In the hunting of deer, duck, goose, rabbit and other game, while the hunter may be in a social group (such as duck blinds), each hunter is autonomous. A hunter may have a dog or two to aid him in hunting, but the dog(s) are responsive to its respective owner/handler. *Thus Maryland statutes regarding hunting are about the individual.*

In the chasing of fox with a pack of hounds, it takes a team of people to manage and hunt a pack of hounds. As in any team, each individual has a specific role or job. To use football as the analogy, in foxchasing there are the coaches who oversee the training of the hounds and the hunting strategies, there is the quarterback that makes the specific calls for the specific plays during the game, and there are the other members of the team to assist the quarterback in the play.

Once foxchasing is no longer exempted from the definition of hunting, it becomes regulated by ALL the hunting statutes, and it becomes the ONLY hunting activity in the statutes in which it takes a team of people and a pack of hounds to execute the hunting activity – and the statutes are not designed for "team hunting." Thus we need to more carefully examine all the statutes as well as the regulations before eliminating foxchasing's exemption from the definition of hunting.

Once foxchasing is no longer exempted from the definition of hunting, it also becomes the ONLY hunting activity mentioned in the statues in which those responsible for the hunting are mounted on horseback. Thus we need to more carefully examine all the statutes as well as the regulations before eliminating foxchasing's exemption from the definition of hunting.

AUDIENCE/SPECTATORS

As noted above, hunting of hunting of deer, duck, goose, rabbit and other game tends to be a solitary activity, with maybe a few fellow hunters for company.

In the chasing of fox with a pack of hounds, quite often (but not always) there is an audience of spectators (of all ages) trailing behind, some mounted on horseback, some on foot, some on the roads in vehicles, watching the hounds (and their handlers) do their job – and hoping to catch a view of a fox.

Once foxchasing is no longer exempted from the definition of hunting, it becomes the ONLY hunting activity in the statutes in which mounted and unmounted spectators are following and observing those who are actually doing the hunting. Thus we need to more carefully examine all the statutes as well as the regulations before eliminating foxchasing's exemption from the definition of hunting.

25 MGPA SB634 DNR FWA.pdf Uploaded by: Lindsay Thompson

Position: FWA



Date: March 3, 2025

Senate Bill 634 - Hunting - Nonlead Ammunition, Fox Chasing, and Deer Management

Committee: Environment and Transportation

MGPA Position: Support with Amendments

The Maryland Grain Producers Association (MGPA) serves as the voice of grain farmers growing corn, wheat, barley and sorghum across the state. Senate Bill 634 requires the establishment of the Deer Management Assistance Program in the Department of Natural Resources and also requires the phasing-out of lead ammunition.

Maryland farmers were estimated to experience \$10M is crop damage in the last survey done in 2012. I would argue that losses far exceeded that in 2024 as many grain farmers reported losing 20%+ of their crop to deer damage. The establishment of a Deer Management Assistance program is very needed and appreciated.

The amendments we would request relate to the lead ammunition phase out requirement by 2029. Lead ammunition is a readily available, effective and cost efficient option for both hunting deer and harvesting them on crop damage permits. Non-lead ammunition capable of humanely killing a deer can be as much as 20% more expensive than lead ammunition. This adds to the rising cost of ammunition overall which has increased just over 20% since 2019. Ammunition in general has not been as readily available in recent years due to manufacturing challenges post-COVID and the non-lead options can be harder to find. We understand the concerns around consumption of carcasses by non-target species; however, Maryland has a want and waste law which requires the retrieval of deer that are harvested and if disposed of carefully after the meat is harvested can avoid lead contamination.

We would ask for either the removal of the lead ammunition ban, extension of the transition period or the ability of the Department of Natural Resources to make a regulatory decision as to when it is feasible to phase out the lead ammunition.

25 MGPA SB634 DNR FWA.pdf Uploaded by: Lindsay Thompson

Position: FWA



Date: March 3, 2025

Senate Bill 634 - Hunting - Nonlead Ammunition, Fox Chasing, and Deer Management

Committee: Education, Energy and the Environment

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SB0634_DNR_SWA_EEE_3-4-25.pdf Uploaded by: Paul Peditto

Position: FWA



March 4, 2025

BILL NUMBER: SENATE BILL 634

SHORT TITLE: HUNTING - NONLEAD AMMUNITION, FOX CHASING, AND DEER MANAGEMENT

DEPARTMENT'S POSITION: SUPPORT WITH AMENDMENTS

EXPLANATION OF DEPARTMENT'S POSITION

The Department of Natural Resources supports SB 634 with amendments because it enables the Department to better gauge interest and participation in unarmed fox chasing so that informed management decisions can be made regarding this activity. It also will provide additional funding to the Department, through hunting license sales to these individuals, that can be used for wildlife management in Maryland, including the Deer Management Assistance Program referenced below.

The Department also supports SB 634 with amendments because it creates a Deer Management Assistance Program within the Department that will enable DNR to offer better services to farmers and landowners experiencing deer damage. The legislation, as written, provides one staff position for this new program.

Lastly, the Department supports SB 634 because it provides a timely phase-in strategy for the prohibition on using lead ammunition for hunting all game species. Non-lead ammunition is not consistently available in all calibers, so having adequate time for hunters to adjust to this requirement is needed. Likewise, manufacturers need time to develop and produce this ammunition in calibers and quantities sufficient to support all hunting opportunities.

The Department respectfully requests two amendments to SB 634 as noted below. Amendment No. 1 makes technical, conforming changes to the purpose and function paragraphs which correspond to the proposed changes in Amendment No. 2. Amendment No. 2 increases the number of staff positions for the Deer Management Assistance Program from one individual to five individuals. This program will be statewide, and one staff member will be inadequate to address the number of landowners currently impacted by deer damage. This amendment also alters Natural Resources § 10-301 to be consistent with the new requirement that unarmed fox chasers purchase a hunting license. Lastly, it amends the phase-in time for non-lead ammunition for muzzleloaders, rifles, and shotguns used for hunting deer and any other game species not specified in subsections (a) through (c) of that section of the bill to be July 1, 2032 to give manufacturers more time to produce the requisite types of ammunition, and hunters more time to acquire and adapt to this ammunition.

BACKGROUND INFORMATION

Unarmed Fox Chasing

SB 634 requires anyone who participates in unarmed fox chasing to purchase a hunting license. It is estimated that approximately 1,500 additional hunting licenses could be sold because of this change. Assuming an 85% resident and 15% non-resident composition for the sales, this change would generate approximately \$80,625 in special funds and potentially \$241,875 in leveraged federal funds from the Pittman-Robertson Wildlife Restoration Grant Program from which the Department has historically received funding.

Deer Management Assistance Program

Deer damage is a significant issue in Maryland and may cause over \$10 million annually for farmers and landowners. Hunting remains the most effective way to manage deer on these properties, with deer hunters annually taking over 75,000 deer statewide. Unfortunately, many properties are either not hunted or could employ hunting in a more effective manner. Oftentimes, female deer are not targeted efficiently, and the deer population is left unchecked. A Deer Management Assistance Program that is adequately staffed would enable the Department to better educate landowners and farmers about the proper techniques for managing deer and assist them with developing sound management plans to address deer problems.

Non-Lead Hunting Ammunition

Currently, only California has a complete ban on lead ammunition for hunting. However, many federal properties and other localized areas have lead hunting ammunition prohibitions for certain game species. Federally, lead shot was banned for all waterfowl hunting beginning in 1987. In Maryland, lead poisoning from hunting ammunition has been documented in raptors, including bald eagles, but populations of these species remain strong.

It is estimated that 50,000 or more hunters could be impacted by a lead ammunition ban in the state. Presently, the primary concerns with requiring non-lead hunting ammunition for all hunting in Maryland are the lack of consistent availability of many calibers and the increased cost of this type of ammunition. Likewise, some calibers are less effective and not as accurate as heavier lead versions. Ethically, hunters want to use the most effective ammunition possible to avoid potential wounding losses of game.

BILL EXPLANATION

SB 634 alters the definition of hunting to include fox chasing. Active participants in this type of hunting would be required to purchase a hunting license. The legislation also creates a Deer Management Assistance Program and provides for one staff position. This program will assist landowners with managing deer to reduce damage. Lastly, the bill requires the phaseout of all lead-based ammunition used while hunting. The phaseout begins with the 2026-2027 hunting season, with all hunting ammunition required to be non-lead by the 2029-2030 season.

(To be offered in the Education, Energy and the Environment Committee)

AMENDMENTS TO SENATE BILL 634 (First Reading File Bill)

AMENDMENT NO. 1

On page 1, in line 7, after "Program;" insert "requiring a hunting license for fox chasing;" in line 19, strike "10-101(k)" and substitute "10-101(k), 10-101(c)(1)(i) through (iv).".

AMENDMENT NO. 2

On page 2, in line 19, strike "ONE" and substitute "<u>FIVE</u>"; in the same line strike "POSITION" and substitute "<u>POSITIONS</u>"; and after line 20, insert:

"<u>10–301.</u>

(c) (1) Except as provided in paragraph (2) of this subsection, the following persons are not required to obtain a hunter's license, bow and arrow stamp, black powder stamp, bonus antlered deer stamp, or sika deer stamp:

(ii) Any resident serving in the armed forces of the United States while on leave in the State, during the resident's leave period, if, while hunting, the resident possesses a copy of the resident's official leave order: **AND**

(iii) <u>Any person serving in the armed forces of the United States who has a service-connected</u> disability, if, while hunting, the person possesses valid military identification[; and

(iv) Any unarmed person participating in an organized foxhunt].".

On page 4, in line 14, strike "2029" and substitute "2032".

BY:

Amendment for SB0634 Lead Ammunition Ban.pdf Uploaded by: Senator Karen Lewis Young

Position: FWA



SB0634/173124/1

BY: Senator Lewis Young

(To be offered in the Education, Energy, and the Environment Committee)

<u>AMENDMENTS TO SENATE BILL 634</u> (First Reading File Bill)

AMENDMENT NO. 1

On page 1, in line 2, strike "**, Fox Chasing, and Deer Management**"; strike beginning with "altering" in line 3 down through "Program;" in line 7; strike beginning with "establishing" in line 10 down through "chasing;" in line 11; strike in their entirety lines 12 through 16, inclusive; in line 19, strike "10–101(k) and"; and strike in their entirety lines 22 through 26, inclusive.

AMENDMENT NO. 2

On page 2, strike in their entirety lines 4 through 20, inclusive.

On pages 3 and 4, strike in their entirety the lines beginning with line 28 on page 3 through line 4 on page 4, inclusive.

24 FEB 25 17:58:40

SB0634 Testimony.pdf Uploaded by: Senator Karen Lewis Young Position: FWA

KAREN LEWIS YOUNG Legislative District 3 Frederick County

Budget and Taxation Committee



THE SENATE OF MARYLAND

Annapolis, Maryland 21401

Annapolis Office James Senate Office Building 11 Bladen Street, Room 302 Annapolis, Maryland 21401 410-841-3575 800-492-7122 Ext. 3575 Karen.Young@senate.state.md.us

District Office 253 East Church Street Frederick, MD 21701 301-662-8520

March 4th, 2025

The Honorable Senator Feldman, Chair The Honorable Senator Kagan, Vice Chair Education, Energy, and Environment Committee Annapolis, MD

Testimony in Favor of SB0634 Hunting - Lead and Lead-based Ammunition - Phase-Out

Chair Feldman, Vice Chair Kagan, and esteemed members of this committee,

SB0634 will phase out lead and lead-based ammunition in hunting. We have known for a long time that lead is toxic. There are no safe levels for human consumption. It is negatively impacting our environment, the animals who live in it, and ultimately, us.

By phasing out lead ammunition, we will be protecting hunters and their families who consume the meat. We will be protecting our environment and the species who call it home. Many animals, including Bald Eagles, feast on gut piles left behind by hunters. When they do, they consume the lead bullet fragments still in the meat. Studies found that as many as half of our Bald Eagle population suffered from lead poisoning.

There are alternatives that are just as accurate and lethal but without the toxic side-effects. Some hunters are concerned that many rifles cannot handle copper ammunition because copper is harder than lead. For older rifles, that is generally true. However, the manufacturers of modern rifles are strengthening their products to handle copper ammunition and other alternatives. In fact, lead ammunition was banned nationwide in 1992 for hunting waterfowl. Manufacturers and hunters adapted easily and waterfowl populations are healthy.

Finally, some hunters are concerned about cost differences between lead and copper. The academic research makes clear that these minor differences in cost are attributable to a lack of demand. As we phase-out lead ammunition, the demand and supply of alternatives will increase, correcting imbalances in price.

We have taken lead out of paint, gas, and pipes. It is time we remove it from our ammunition. To protect ourselves and our Bald Eagles, and all wildlife, I urge a favorable report.

Sincerely,

lacen faires young

Senator Karen Lewis Young

Safari Club International Lead Ammo Use Cases Over

Uploaded by: Beebe Frederick Position: UNF

WHY BLANKET LEAD AMMUNITION BANS ARE NOT GOOD POLICY

State and federal governments are being pressured to implement bans on use of lead ammunition in hunting. Safari Club International opposes blanket prohibitions on lead ammo. Bans provide limited benefits, while reducing hunter participation and conservation funding.

- NO ALTERNATIVE AMMO. Non-lead ammunition is often hard to find, and many firearms have no viable non-lead alternative ammo available, including .22 long rifles (often used in small game hunting), air guns, muzzleloaders, older models, and rare calibers.
 Many hunters will be forced to purchase not only new ammunition, but new firearms.
- LOSS OF HUNTER ACCESS. Alternative ammunition is also not available in the quantities needed to support hunters. Nor will it become available. Manufacturers cannot easily switch from lead to copper, as the manufacturing processes and market forces are entirely different. Non-lead ammo is already significantly more expensive and more difficult to find, especially for rural hunters. Greater expense and less availability will force some hunters to stop hunting.
- LOWER RECRUITMENT. New, novice, and youth hunters are disproportionately impacted by lead ammo restrictions. These hunters often start with small game, smaller calibers, and lighter guns, for which fewer non-lead alternatives exist.
- CONSERVATION FUNDING CUTS. Fewer hunters means diminished dollars from reduced license sales and matching funds from federal excise taxes on hunting equipment and ammunition. These Wildlife Restoration Fund dollars are the primary source of state conservation budgets.
- WILDLIFE MANAGEMENT IMPACT. Hunting is the primary management tool for abundant species like deer and black bear. Less hunting
 results in less effective wildlife management.
- LIMITED SPECIES AT RISK. Lead ingestion does not impact species uniformly. While research indicates potential negative effects from lead ingestion on scavenging bird population growth, it does not reflect negative impacts on mammal species, even scavenging mammals.
- NO POPULATION DECLINES. Research on eagles and waterfowl has produced consistent results: lead ingestion can slow population growth
 rates but has not caused population declines. The California condor is the only wild species where research suggests negative population
 impacts due to lead ingestion, but current regulations already restrict use of lead ammo in condor range.
- NO LINK FROM LEAD AMMO TO HUMAN HEALTH ISSUES. The Center for Disease Control does not classify use of lead ammo in hunting as a health risk except to nursing mothers. Outside of nursing mothers, no studies link the normal use of lead ammo in hunting or the consumption of lead in game meat with illness in humans. Neither the FDA, EPA, or the American Academy of Pediatricians have warnings about eating game meat shot with lead.
- AMMO IS NOT PAINT. Lead is used commercially in several forms. The form in ammunition is not the same and is less easily absorbed into the bloodstream, then the form in paint or gasoline.
- BLANKET LEAD AMMO BANS ARE NOT THE ANSWER. An advisory council to the U.S. Fish and Wildlife Service recently rejected a mandatory lead ban on federal refuges, and prioritized voluntary, incentive-based programs to generate hunter buy-in and avoid the loss of hunter participation.
- ALTERNATIVE POLICY CHOICES EXIST. Hunter choice is key, because lead alternative ammo is not suited for every gun or hunting opportunity. Where lead ammo is permitted, regulators have other options to reduce potential ingestion by scavenging birds, such as requiring hunters carry out or bury gut piles, subsidizing non-lead ammo or bonded lead bullets, or more.





SB-0634_WMSC_kelkye_UNF_2025.pdf Uploaded by: Ben Kelkye

Position: UNF



Ben Kelkye, President wmsc_benk@hotmail.com ben@kelkye.com 301 401-6263

February 28, 2025

Honorable Members of the Maryland Senate Education, Energy and the Environment Committee Senate Office Building Annapolis, Md. 21401

Subject: SB-0634 Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management

UNFAVORABLE (As Written)

Honorable Senators:

I represent the Western Maryland Sportsmen's Coalition, Inc. The Coalition is comprised of many hunting clubs and sportsmen's associations and thousands of their individual members living in Garrett, Allegany, Washington, Frederick, and Carroll Counties. As President of the Coalition, I work together with the leadership of these Western Maryland Sportsmen's organizations for the recognition and benefit of the sportsmen and sportswomen of the five most western counties of Maryland.

On March 4, 2025, the Senate Education, Energy and the Environment Committee will be hearing the advantages and disadvantages of **SB-0634** - Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management

I, as a private citizen of this state and as the elected representative of the Western Maryland Sportsmen's Coalition, Inc., strongly urge **you to vote unfavorably on this bill as written.**

Nonlead Ammunition:

• We request that the deadline for mandatory nonlead ammunition use for hunting be extended by at least one year for each of the four categories. There are several reasons for this request: Many of our hunters have a large monetary investment in personal inventories of various calibers, weights, gauges and shot sizes of lead ammunition. They

would like the opportunity to utilize this ammunition hunting game rather than having that invested money go to waste sitting in a closet. In addition, nonlead ammunition, especially copper, is more expensive and not yet available in all calibers, comparable weights and dynamics as current lead ammunition. Further, older shotguns (which are many) have softer barrels that cannot handle steel or shot harder than lead. Those firearms will become useless as hunting instruments, forcing the purchase of newer, more expensive firearms. A little more transition time would be very helpful.

Hunting License Requirement for Unarmed Fox Chasing:

 While we do not object to the concept of requiring those participating in unarmed fox chasing to purchase a "hunting license", we are concerned over the exemption of such persons from the requirement to obtain a certificate of competency in firearms and hunter safety before obtaining a hunting license. We propose that the hunting license issued to those engaged in unarmed fox chasing be somehow marked or identified as valid for unarmed fox chasing only. If it is not identified as such, what would prohibit someone with this license from engaging in any type of firearms hunting (deer or small game, for example) without the proper competency and hunter safety instruction?

Together with the sportsmen and sportswomen of Western Maryland, we strongly urge you to vote against SB-0634 as written.

Respectfully,

Ben Kelkye

President Western Maryland Sportsmen's Coalition, Inc.

Ben Kelkye Jerry Zembower Joe Winter Matt Guilfoyle President, WMSC, President Frederick County Sportsmen's Council President, Garrett & Allegany Sportsmen's Association President, Washington County Federation of Sportsmen's Clubs President, Carroll County Sportsmen's Association

Washington

Frederick

Carroll

SB 634 Lead ammo.pdf Uploaded by: Cathy Wright Position: UNF



SB 634 Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management

UNFAVORABLE

The Maryland State Rifle & Pistol Association (MSRPA) opposes SB 634.

This is an anti-hunting bill that will harm the Maryland citizens and families who rely on hunting to feed their families. Lead bans would require alternative products that are more expensive and less available. Many calibers of rifles, for example .22 caliber ammunition, which are used to introduce many new and young people to hunting are not commercially available. In fact, many companies introduced lead-free .22 caliber bullets but quickly discontinued them as they do not function properly in most .22 rifles. In addition, a lead ban could ultimately ban many older deer rifles because copper bullets require a longer bullet at higher velocities and these rifles have barrels that have a slower twist that will not stabilize copper bullets. Hunters must be free to choose the ammunition that will best serve their needs for the ethical and efficient harvesting of wildlife.

In the United States, wildlife experts do not manage wildlife based on single mortality incidents or emotions. Our country's wildlife management practices are based on the North American Model of Wildlife Conservation, which is widely recognized as the best in the world. For more than a century, wildlife in the United States has been successfully managed through this model and has led to an incredible restoration of multiple species. The so-called "facts" provided by gun control activists and anti-hunting gurus do not use specific peer-reviewed scientific data.

The traditional ammunition used in North America for the past 400 years has never led to one case of an individual suffering lead poisoning due to the consumption of wild game taken with lead ammunition. Studies conducted by the Centers for Disease Control and Prevention (CDC) in 2008 found that blood-lead levels in hunters consuming wild game harvested using traditional ammunition were actually lower than individuals in the same community that didn't consume wild game.

Most importantly, such a ban has <u>no peer-reviewed</u>, <u>supportable scientific data</u> that shows that lead ammunition causes significant and measurable impacts on wildlife populations. In fact, the science shows that wildlife populations have never been healthier in America.

Page 1 of 2 SB 643

Hunters are America's original conservationists. They have helped contribute more than \$27 billion, when adjusted for inflation, in Pittman-Robertson excise taxes to the Wildlife Restoration Trust Fund since 1937, and over 90% of this funding is directly from the sale of firearms and ammunition. The Trust Fund benefits all by supporting wildlife conservation efforts that encourage abundant wildlife and habitat restoration along with access to public lands for hunters, anglers, recreationists, and other outdoor enthusiasts. Maryland has benefited from the Wildlife Restoration Trust Fund and it would be a shame to lose these benefits.

The Maryland State Rifle & Pistol Association respectfully requests an UNFAVORABLE report on SB 643.

Thank you for your consideration.

Cathy S. Wright, MSRPA VP Legislative Affairs <u>cwright@msrpa.org</u> <u>https://www.msrpa.org</u> 919.360.0484

The MSRPA is the official National Rifle Association state organization for Maryland. The MSRPA's mission is to defend your rights in Maryland, support training in firearm safety and shooting skills through its affiliated clubs, and sponsor and sanction local competition throughout the state.

SB0634.pdf Uploaded by: charles Knaggs Position: UNF

Charles knaggs 35296 golf course drive Mechanicsville, MD 20659 <u>c-knaggs@hotmail.com</u>

lam writing in opposition to SB 0634. This bill would significantly increase the cost of hunting in the state of Maryland. Non lead ammunition is 3-4 times the cost of lead ammunition. Lets also not forget HB 937 that is looking to raise the sales tax on ammunition from 6% to 12%. At the time of this writing a box of 45-70(a popular straight wall cartridge that is used in the straight wall only portion of region B for deer season) barnes copper ammunition is 65.99 at midwayusa.com. Add to that 12% sales tax and that is 73.91 for a box of 20 rounds. That is 3.70 for each round minus shipping, if ordering only 1 box that would be an additional 1.00 per round. Sighting in a rifle for deer season is going to be a significant financial burden for every hunter because the cooper ammunition would have to be used for sighting in to ensure accuracy in the field. Sighting in a rifle and becoming proficient with a new ammunition type could take some people several boxes if ammunition. Contrast that to Nosler whitetail country copper played lead ammunition at 37.99 for a box of 20 at midwayusa.com There is also a very big problem with availability in calibers/gauges. Not every caliber/gauge has non lead ammunition available for it. This would force hunters to buy new firearms to continue hunting in Maryland. Even calibers that have lead free ammo made for them face steep shortages in supply every year. New firearms are also very expensive. This would also cause many hunters to no longer be able to use firearms passed down from generations. A lot of the science behind lead being in carcasses and in turn being ingested by animals is flawed. Carcasses are very seldom left in the field. When an animal is harvested the animal is removed from the field for processing. Occasionally an animal is not able to be recovered, this accounts for such a small number of animals it would be hard to believe lead ingestion from these few carcasses would be statistically significant. This bill would make hunting small game super expensive and give hunters relatively few options for grain weights and bullet types. For large game the selection is a little broader but not much. This will severely limit hunters ability to match grain weight and bullet style to their firearm to give them the most accurate combination. This will result in a lot of hunters having to sacrifice accuracy to confirm to this bill should it become law. The result of sacrificing accuracy will result in more wounded/non recovered animals and lower harvest numbers creating population management problems for the Department of Natural Resources when below quota numbers of animals are harvested. When a bullet is made from a non lead metal, for rifles the most common is copper, the bullet has to be made longer and of different shape to maintain an acceptable grain weight to keep similar terminal ballistics. This lengthening and reshaping makes some rifles useless with non lead ammunition as it requires a different twist in the rifling of the barrel to stabilize the bullet for accuracy. A bullet that is not stabilized from the rifling is wildly inaccurate and can not safely be used for even target shooting. Most older rifles like the ones most hunters use do not have rifles with a rate of twist that is correct for longer non lead ammunition.

This bill will do nothing but marginalize the hunters of Maryland forcing many of them out of the activity due to economics of the non lead requirement/need to purchase new equipment to comply. This same legislative session the general assembly is also looking to pass HB 1253 creating a maryland department of social equity. SB 0634 is not creating social equity. This is blatant discrimination to a population of citizens in the state of Maryland and I strongly urge the committee to vote unfavorably for SB 0634 and not let it pass committee.

Thank you,

Chuck Knaggs

MD_SB_0634_OPPOSE_.pdf Uploaded by: Christopher Kopacki

Position: UNF



February 28, 2025

Education, Energy, and the Environment Committee ATTN: Chair Brian Feldman 2 West Miller Senate Office Building Annapolis, Maryland 21401

RE: Oppose Senate Bill 0634

Dear Chair Feldman, Vice Chair Kagan and Honorable Members of Education, Energy, and the Environment Committee:

On behalf of the organizations listed below, we write to you in opposition to Senate Bill 0634 that proposes to phase out all lead ammunition for hunting purposes and respectfully ask for an unfavorable report for the reasons outlined below.

Our organizations, along with active members who live, hunt, and recreationally shoot in Maryland, strongly oppose undue lead ammunition restrictions that would significantly restrict hunting and shooting access for these important user groups in Maryland. We, along with the federal Hunting and Wildlife Conservation Council, believe that efforts related to non-traditional ammunition should not be blanket mandates but rather focus on educational and voluntary efforts.

Mandating non-traditional ammunition for hunting – especially at a time when ammunition can be hard to find in many places, particularly for certain calibers – is unnecessary, unwarranted, and will undoubtedly hurt hunter recruitment and retention in the state. States throughout the country are grappling with ways to increase hunter participation and protect crucial conservation funding, and these restrictions only add additional barriers to entry for hunters, especially new, novice, youth, or rural hunters.

Not only will access to, and availability of, non-lead-based ammo be limited, but the price difference between lead ammunition and non-traditional ammunition can provide yet another barrier for those wishing to hunt throughout Maryland. This bill would disproportionally affect those who may not be able to find and/or afford more expensive non-lead ammunition as well as hunters in rural areas throughout the state. The result of prohibiting lead ammunition is that hunters will simply not have the ammunition they need to hunt, or purchasing ammunition will

become considerably more difficult, both of which stand to lead to fewer hunters afield and fewer conservation dollars generated through the sale of licenses, tags and ammunition.

The proposed phase-out ignores the importance of hunting to both Maryland's heritage and to the state's economy. Recent reports show that Maryland hunters contribute \$328 million to the economy while directly supporting over 4100 jobs and providing over \$29 million to state and local taxes. Additionally, the purchase of licenses and resulting federal dollars apportioned through the U.S. Fish and Wildlife Service's Wildlife Restoration Program totaled nearly \$18 million last year. These dollars go to support conservation projects, including increasing access, habitat improvement, wildlife management, scientific research, hunter education, land acquisition and more.

A potential decline in hunter recruitment and participation, as well as resultant declines in conservation funding and hunting's role as a management tool, must be weighed against the potential benefits of a lead phase-out. Those benefits are far more limited than proponents of a lead ban like to admit. Use of lead ammunition is **not** causing a reduction in bird populations. Rather, recent studies have suggested that ingestion of lead ammunition *slows* the population growth rate of eagles *but does not reduce said population*. Thus, the *very best* scenario articulated by those who are pushing a lead ban is that eagle populations continue to grow (at a slightly lower rate), all the while knowing that hunter recruitment and wildlife conservation dollars will be significantly reduced as a result of the ban.

Finally, this legislation lacks any scientific support. There have been no significant environmental or health impacts caused by hunters using traditional ammunition in the state of Maryland. Unsurprisingly, the New York Department of Environmental Conservation has previously opposed this kind of bill because it restricts hunting access and achieves extremely minimal benefit. As explained in the New York Department's Lead Ammunition Working Group report regarding use of traditional ammo, the Working Group did not recommend a lead ammo ban, because it "would be challenging to advance and … come with significant social costs, potentially compromising the effectiveness of other conservation efforts." The Working Group further explained that any legislative ban on the use of traditional ammo on state lands "would immediately create additional costs and challenges for hunters due to availability issues. Also, the use of lead hunting ammunition for upland game is not a documented source of water contamination." The Working Group expressed concern that, due to the higher cost and limited availability of non-lead ammo, a lead ammunition ban "may reduce hunting activity on public lands and may impact deer population management on these properties."

Sound, science-based conservation and management decisions is a key tenet of the North American Model of Wildlife Conservation. State wildlife agency professionals understand and use this model every day and are the ones best suited to make wildlife management decisions. Being so, we respectfully ask that you oppose Senate Bill 0634.

Maintaining America's large number of hunters and target shooters is crucial to maintaining the revenues necessary to sustain abundant wildlife and wildlife habitat—for both game and

nongame—conservation programs as well as access related programs. Funds generated through the sale of hunting licenses, tags, permits, and ammunition all go to the benefit of Maryland's natural resources.

Thank you for your time and consideration of this important measure.

Sincerely,

Beebe R. Frederick, III Safari Club International

Christopher G. Kopacki, Ph.D. National Shooting Sports Foundation

Todd Adkins, Ph.D. Sportsmen's Alliance

SB0634_Testimony_2A_Maryland.pdf Uploaded by: John Josselyn

Position: UNF





Senate Bill 634 Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management UNFAVORABLE

Senate Bill 634, while similar to non-toxic legislation passed in California, is far more expansive in scope. Our opposition to Senate Bill 634 should not be construed to stem from a lack of concern for the environment or wildlife. It is based upon practical technical concerns and logistics issues, plus the bill language which places excessive and arbitrary power in the hands of an appointed official.

The provisions in this bill will make it difficult and expensive for many deer hunters in Maryland to continue to hunt deer. The net result will be fewer Maryland citizens hunting deer in Maryland. Hunting is a critical hunter funded component of the Department of Natural Resources' (DNR) overall mandate to promote wildlife conservation by maintaining a balance between wildlife population and the available habitat.

The ecology and terrain of Maryland is quite different than that in California. Accordingly, the type of firearms and cartridges used are also different. In Maryland, most deer are taken in heavy brush and timber at ranges under 100 yards. Hunters use short, easy to maneuver firearms chambered for firearms with an effective range of approximately 150 yards.

Two of the most popular cartridges, the .30-30 Winchester and the .35 Remington have origins dating back to 1895 and 1906 respectively. Due to their geriatric vintage, the designers never envisioned, much less designed these popular cartridges, to utilize the new non-lead projectiles. There are technical limitations involved which limit which projectiles can successfully employed. Consequently, ammunition manufacturers have no incentive to produce non-lead ammunition for these cartridges because the customer's firearms cannot effectively use them. With no viable market for their products, the net result is no factory loaded non-lead ammunition, which in turn means fewer hunters, fewer hunting licenses, reduced revenue and increased pressure on the DNR's limited resources to control Maryland's wildlife population.

My research has identified one source for non-lead .35 caliber bullets in the appropriate weight. The manufacturer's data does not reveal the muzzle velocity the bullet is designed for. However, it does indicate the recommended rifling rate of twist is 1/10 or 1 revolution in 10" of barrel length. The standard twist rate for factory barrels in .35 Remington is 1/16

or 1 revolution in 16" of barrel length. In short, this bullet is not suitable for the .35 Remington cartridge.

The foregoing presumes the hunter is also someone who is experienced and equipped to "hand load" non-lead ammunition. Even then, the challenge is to find reliable information on the appropriate combination of powder type and quantity, primer, and case to produce ammunition which is reliable, accurate and above all else, safe in the type of firearm for which it will be used.

The question of finding ammunition for hunting handguns only compounds the problem.

Section §10-214 (D) establishes a deer management program with an addition full-time paid position. This provision will place additional financial pressure on the DNR at a time when Maryland is facing an enormous budget deficit. It is unlikely the revenue from hunting licenses from fox chasing will be sufficient to fund the additional personnel required to maintain a viable program.

Section §410 (Q) (1) exempts those persons participating in unarmed fox chasing from the hunter safety training requirements of 10-301.1(A)(1), while Section §410 (Q) (2) requires the participants to possess a resident or non-resident full season hunting license.

SB 634 does not address the fact that the DNR does not currently have a protocol for issuing full season fox chasing licenses as a separate license type. Nor does it have a means for DNR officers to determine in the field whether a person who is hunting other game is doing so with a permit which "bypassed" the hunter safety course requirement contained in §10-301.1.

Until and unless the spectrum of factory-loaded ammunition becomes adequate to make a ban on non-lead ammunition practical, and provisions are made to address the hunting license issue, we must recommend an unfavorable report on SB 634.

John H. Josselyn 2A Maryland 03/04/2025

Attachments: Natural Resources §10-301.1 Hunting Zone Map Maker copper bullet info

Article - Natural Resources

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§10–301.1.

(a) (1) (i) On or after July 1, 1977, a person under 18 years of age may not procure a hunting license or hunt in the State, unless the person has first been issued a certificate of competency in firearms and hunter safety.

(ii) On or after July 1, 1977, a person, regardless of age, may not procure a hunting license without producing a certificate of competency or a hunting license issued before July 1, 1977, or making out an affidavit that the person hunted before July 1, 1977.

(2) (i) This section does not apply to nonresidents of Maryland who purchase a nonresident 3-day hunting license in the State to hunt wild waterfowl.

(ii) This section applies to nonresidents of Maryland who purchase hunting licenses in the State to hunt wildlife other than wild waterfowl.

(b) (1) The Department shall prescribe a course of instruction in conservation and in competency and safety in the handling of firearms.

(2) (i) The Department shall designate those persons or agencies authorized to give the course of instruction, and this designation shall be valid until revoked by the Department.

(ii) Those designated persons shall submit to the Department validated listings naming all persons who have successfully completed the course of instruction.

(3) The Department shall issue a certificate of competency and safety to each person who successfully completes the course of instruction, and the certificate shall be valid until revoked by the Department.

(4) The Department may not issue a certificate of competency and safety to an individual under the age of 18 unless the individual has completed satisfactorily the course of instruction, or produces a certificate of competency or a hunting license issued prior to July 1, 1978, or makes out an affidavit that the individual had such a license. (c) (1) The Department shall institute and coordinate a statewide course of instruction in conservation and in competency and safety in the handling of firearms, and in so doing, the Department may cooperate with any political subdivision or with any reputable organization having as one of its objectives the promotion of competency and safety in the handling of firearms, such as the National Rifle Association and local rod and gun clubs.

(2) The Department may conduct the course in hunter safety and issue the certificates, using Department personnel or other persons at times and in areas where other competent agencies are unable or unwilling to meet the demand for instruction.

(3) Any similar certificate, or hunting license, issued outside the State by a governmental agency, shall be accepted as complying with the requirements of paragraph (1) of this subsection, if the privileges are reciprocal for Maryland residents.

(d) The Department shall adopt regulations to provide for the course of instruction and the issuance of the certificates consistent with the purpose of this section.

(e) (1) On or after July 1, 1977, any person who obtains a hunting license by presenting a fictitious certificate of competency or who attempts to obtain a certificate of competency or hunting license through fraud shall have his hunting privileges revoked by the Department for a period not to exceed 1 year.

(2) Any applicant who is refused a certificate of competency under this section may appeal the decision or action of the issuing unit to the Secretary.

(f) (1) The Department or a person designated by the Department may issue a 1-year gratis hunting license to a Maryland resident under the age of 16 years who has successfully completed a hunter safety course.

(2) A hunting license issued under this subsection shall include all applicable hunting stamps, except for migratory game bird stamps and bonus deer stamps.

(3) An individual may be issued only one such license during the individual's lifetime.

(g) (1) The Department or a person designated by the Department shall issue a complimentary hunting license each year to an individual who:

(i) Has been authorized by the Department to give the course of instruction in conservation and in competency and safety in the handling of firearms under subsection (b) of this section;

(ii) Has completed at least 5 years of service as an instructor of this course;

course;

(iii) Maintains active certification as an instructor of this

(iv) Has taught two hunter safety courses during the fiscal year preceding the issuance of the license; and

(v) Has indicated to the Department an interest in receiving a complimentary hunting license.

(2) A hunting license issued under this subsection shall include all applicable hunting stamps, except for migratory game bird stamps and bonus deer stamps.

(h) (1) The Department may adopt regulations to establish a program to provide incentives for the successful completion of a hunter safety course by an individual who is not required by law to complete a hunter safety course.

- (2) The program may include:
 - (i) Discounts on hunting licenses; and
 - (ii) Any other incentive the Department determines to be

appropriate.

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DESIGNATED RIFLE, SHOTGUN AND HANDGUN COUNTIES AND AREAS FOR FIREARMS SEASON DEER HUNTING










2025 MD SB 634- Lead Ammo Ban - LOO.pdf Uploaded by: Kaleigh Leager

Position: UNF



То:	Hon. Brian J. Feldman Chair, Senate Education, Energy, and the Environment Committee 2 West Miller Senate Office Building Annapolis, MD 21401
Re:	Senate Bill 634 – Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management
Position:	Oppose in Current Form / Request Amendment
Date:	3/4/2025

Chairman Feldman, Vice Chair Kagan, and Honorable Members of the Maryland Senate Education, Energy, and the Environment Committee,

As the Assistant Manager, Mid-Atlantic States for the Congressional Sportsmen's Foundation (CSF), and as a generational Eastern Shore Native and a resident hunting and fishing license holder, I respectfully urge that the nonlead ammunition provision within Senate Bill 634 (SB 634) – Hunting – Nonlead Ammunition, Fox Chasing, and Deer Management, be amended out of this legislation. While CSF is in support of the Fox Chasing and Deer Management provisions in this bill, we cannot support this legislation in its current form as it contains the non-lead hunting ammunition provision.

Founded in 1989, the Congressional Sportsmen's Foundation (CSF) is the informed authority across outdoor issues and serves as the primary conduit for influencing public policy. Working with the Congressional Sportsmen's Caucus (CSC), the Governors Sportsmen's Caucus (GSC), and the National Assembly of Sportsmen's Caucuses (NASC), CSF gives a voice to hunters, anglers, recreational shooters, and trappers on Capitol Hill and throughout state capitals advocating on vital outdoor issues that are the backbone of our nation's conservation legacy.

CSF supports keeping hunting as the preferred method of wildlife management as it philosophically follows the North American Model of Wildlife Conservation and provides critical funding for state level wildlife and habitat management through the American System of Conservation Funding (ASCF)¹. CSF is in support of bringing fox chasing in line with all other forms of hunting by requiring the purchase of a hunting license and also supports the laudable effort of bringing farmers and hunters together to manage the White-tailed deer populations and to help mitigate any potential crop depredation. Although we would like to offer our support for these items, we unfortunately must adamantly oppose SB 634 in its current form due to the inclusion of the nonlead hunting ammunition language.

The nonlead ammunition provision will require the Department of Natural Resources (DNR) to require the use of nonlead ammunition for all game species on or before July 1, 2029. The long-term effects of a statutory ban on lead hunting ammunition may be extremely detrimental to conservation funding, which is directly driven by hunters. Moreover, there are proven-successful voluntary and incentive-based programs run by other states to encourage hunters to switch to lead alternatives that avoid these unintended, but foreseeable consequences. CSF strongly suggests that Maryland look instead to a similar program that could be managed by the DNR which would allow them to address the social concerns that have been raised around lead hunting ammunition, without compromising their funding stream.

When it comes to lead ammunition bans, the negative impact to hunter participation, and ultimately conservation funding, is of concern to CSF. As of 2024, there were 113,460 certified paid hunting license holders in Maryland that generated \$6,379,820 in hunting license sales and \$9,217,537 in USFWS Wildlife Restoration dollars, totaling more than \$15.5M in conservation dollars from hunting alone. Hunters are boots-on-the-ground conservationists that continue to provide the most efficient and cost-effective method of managing wildlife populations.

In the current market, non-lead ammunition is not sufficiently available and is more costly, which will likely prevent hunters from participating in a time-honored tradition that is a pillar of the state's culture. Additionally, like many states in the region, Maryland is continuing to see a steady increase in human-wildlife conflicts, particularly with White-tailed deer populations. The nonlead ammunition provision within SB 634 will likely eliminate opportunity for hunters to take game, as they may not be able to hunt if they cannot access non-lead ammo. This unintended, but foreseeable consequence of the proposed lead ammunition ban will ultimately result in the legislature creating a new barrier for hunters to keep wildlife populations such as White-tailed deer within acceptable biological and social carrying capacities.

Creating this participation barrier harms more than just Maryland's sportsmen and women and the wildlife that will no longer be properly managed through hunting; it also has significant negative financial impact on both the DNR and the state's economy. As noted above, Maryland's DNR receives significant funding through the unique "user pays – public benefits" structure of the ASCF. Sportsmen and women support wildlife management through purchasing sporting licenses, as well as a manufacturer-level excise tax that is levied on outdoor goods such as firearms and ammunition (Pittman-Robertson). Because non-lead ammunition is not sufficiently available to hunters in the current marketplace or for all hunting calibers, phasing out lead ammunition will

¹ American System of Conservation Funding (ASCF)

Your Inside Connection to Outdoor Legislation

ultimately lead to fewer sales of hunting licenses, and consequently the DNR will have less money to manage the state's wildlife resources.

Upon request, CSF is more than willing to provide this body and the DNR, years of documented evidence from existing voluntary and incentive-based programs. Management objectives to address localized concerns with the use of lead ammo can be addressed effectively, and in a manner that does not create the widespread and foreseeable unintended consequence of hurting all conservation efforts in the state through decreasing conservation funding. CSF encourages the legislature to work with the DNR to develop and implement such a program should science support the need.

In closing, CSF encourages the legislature and the Department of Natural Resources to work together to implement incentive-based programs for the use of non-lead hunting ammunition by hunters if there exists demonstrable scientific evidence that such an effort is needed to address population-level impacts of lead exposure in specific wildlife species. CSF further recommends that such a program be developed and tested prior to any further consideration of a statutory ban on lead ammunition with its attendant and consequential diminishment of conservation funding. For these reasons, we respectfully request the nonlead ammunition provision of this bill be removed.

Sincerely,

Walign E. Leagen

Kaleigh E. Leager Assistant Manager, Mid-Atlantic States | Congressional Sportsmen's Foundation 110 North Carolina Ave, SE | Washington, DC 20003 kleager@congressionalsportsmen.org | 202-543-6850 X 20

Enclosed: Review of Options for Effectively Addressing the Issue of Lead Hunting Ammunition and Wildlife (North American Non-Lead Partnership)

Your Inside Connection to Outdoor Legislation

Options for Effectively Addressing the Issue of Lead Hunting Ammunition & Wildlife

Voluntary Efforts Provide Engagement with Community as Partners in Success

Voluntary efforts have documented improvement in community support and participation in mitigation of lead exposure, while regulatory approaches have resulted in negative perceptions of scientists and agencies although neither have resulted in reductions in lead caused mortality.

California is currently the only state with statewide legislation requiring the use of lead-free hunting ammunition. Data from CDFW conservation officers indicated that deer hunters contacted on public land "self-reported" high rates of non-lead ammunition use following the implementation of the legislation. Voluntary efforts in AZ are restricted to two 2-week deer seasons with 87% participation for over a decade. If using lead poisoning as the measure of success in populations of CA condors, both populations (California/Mexico & Arizona/Utah) continue to experience unsustainably high levels of lead exposure and mortality. Neither approach has yet solved the problem. However, if attitudes and actions are measured within the hunting population, voluntary programs have demonstrated high levels of support. Further, recent human dimensions work documented negative and hostile opinions within California hunters regarding the regulation of ammunition, including increased distrust of science and scientists, and belief that the legislative requirement was connected to anti-hunting efforts, a distinct difference from other areas of the country, many of which have been engaged with voluntary programs.

Enforcing lead-free ammunition requirements for centerfire and other single projectile firearms is nearly impossible for enforcement officers. Lead-core, copper-jacketed projectiles are indistinguishable from lead-free options, and despite the greater than 15 years of existing regulation in parts of CA, no field tests have been developed to assist enforcement officers. Measures of compliance have not been conducted in California beyond self-reporting, in part due to the inability to differentiate between bullet types. This creates an unenforceable mandate for enforcement officers, which erodes legislative authority.

Collaborative Partnerships Are Growing Across North America- MD DNR is Actively Participating

States wildlife management agencies working in cooperation with stakeholders are finding proactive education and engagement results in measurable success.

MD DNR has participated in a combination of programs, including a regional engagement effort through NEAFWA. In 2024 alone, MD DNR has participated by hosting and supporting 4 separate modern hunting ammunition workshops with staff and stakeholders to learn more about lead exposure in wildlife from hunting ammunition, techniques for sharing information, information about the North American Non-lead Partnership and potential engagement with

hunters in MD. Support for voluntary, incentive based programs has been raised through these engagements, including with MD DNR commissioners interested in how voluntary programs may be effective in MD. Initial human dimensions work indicates positive response from staff and stakeholders for continuing to engage hunters as partners in addressing unintended lead exposure in wildlife from hunting ammunition. New hunter education content is being developed to increase the engagement with hunters across the region, including Maryland.

MD DNR has the skilled staff to navigate complex conservation challenges, and the ongoing regional work through NEAFWA provides a method for the state to maximize positive outcomes for constituents and wildlife, while maintaining support for the application of wildlife management. Wildlife management agencies have the appropriate processes to manage wildlife conservation with input from the public. Wildlife management through the department allows for the management of contentious conservation topics and ability to address challenges through adaptive management. Proactive actions conducted by states can assist in developing informed constituents, and improve conservation practices while maintaining necessary flexibility to respond to new challenges and information. MD DNR has already enacted a series of proactive efforts to support the adoption of conservation behaviors that reduce the risk of lead exposure in wildlife from hunting ammunition.

North American Non-lead Partnership Support for Fish & Wildlife Management Agencies

A formal way to demonstrate momentum in the state of Maryland for voluntary lead-free hunting education and incentive programs is through Maryland hunting conservation organizations, including MD DNR, joining the North American Non-Lead Partnership (the Partnership). Joining the Partnership demonstrates a formal commitment to promoting voluntary programs as evidenced by the <u>resolution</u> that all partners agree to. By joining the Partnership, <u>partnering organizations</u> have access to staff who are knowledgeable in communicating messages and implementing voluntary education and incentive programs that have been successful in other states. Through development of funding and incentive program goals, the Partnership has the demonstrated skills and abilities to implement education and incentive programs to increase hunter engagements in voluntary lead-free hunting programs. For example:

Example #1 Arizona Strip Mule Deer Hunt

Working in collaboration with hunters on the Kaibab Strip, Arizona Game & Fish
Department, The Peregrine Fund, and other partners built a voluntary, incentive program that supports the use of lead-free ammunition during the mule deer hunting seasons.
Hunters have contributed to the conservation and stewardship of scavenging wildlife by using lead-free ammunition or removal of remains containing lead fragments from the field. For over a decade, 87% of hunters have volunteered to take action that reduces the amount of lead introduced into the food web.



The above graph shows the percentage of Kaibab Plateau deer hunters (green line/area, percent on left) voluntarily choosing to reduce lead available to scavenging wildlife by either using lead-free hunting ammunition or removing gutpiles of animals shot with lead hunting ammunition and the resulting tons of leaded food removed from the food web/lead-free food made available to scavengers throughout the duration of the program (blue bars, tons on the right).

Example #2 Utah DNWR Incentive Program

Utah Division of Wildlife Natural Resources works together with conservation
organizations and hunters in southern UT to increase the use of lead-free ammunition.
Over 80% of hunters in the area voluntarily choose to use modern lead-free hunting
ammunition, providing valuable food sources free of accidental lead contamination for
wildlife that feed on the remains left in the field.

Example #3 Oregon Dept of Fish & Wildlife

Oregon Department of Fish & Wildlife has worked with partners, including the Oregon Zoo, hunting organizations, and others, to develop a statewide voluntary program. A pilot test on The Nature Conservancy's Zumwalt Prairie Preserve found that hunters chose to support conservation efforts through the choice of lead-free ammunition, going from less than 30% choosing lead-free hunting ammunition, to 77% choosing lead-free within 3 years of the program starting. Now hunters state-wide are offered opportunities to test, purchase, and win hunting gear and other incentives for voluntarily choosing lead-free ammunition.

To become an NANP partner, an organization agrees and formally commits to the Partnership resolution promoting voluntary education and incentive programs. To learn more about how to become a partner, organizations are encouraged to contact Partnership co-founder Leland Brown and Chris Parish to be sent a partnership packet to review.

Continental Efforts to Engage Communities as Partners

Positive engagement with stakeholders provides opportunities for success.

The work the MD DNR has engaged in is connected to efforts across the continent. The North American Non-lead Partnership has over 50 <u>partners</u> across the US and Canada, including North East Association of Fish & Wildlife Association (NEAFWA) and Midwest Association of Fish & Wildlife Agencies (MAFWA). The NEAFWA program is funded through 2025 and is pursuing additional funding to support member states with engagement with stakeholders and developing effective strategies to address unintended lead exposure without negatively impacting the ability of wildlife professionals and stakeholders to manage and remain engaged as partners in conservation. Through

the support of NEAFWA members, including MD DNR, hunting education modules have been developed to support training of hunter education instructors, mentors, new hunters and others on options to reduce lead poisoning in wildlife from hunting ammunition. Additionally, updates to basic hunter education core curriculum have been approved and are in development for the instruction of every new hunter across North America.

MAFWA, in cooperation with the Partnership, and a broad variety of stakeholders including NGOs and industry, recently approved Best Management Practices to support wildlife management agencies and other stakeholders in addressing unintentional lead exposure from sporting practices (including hunting and fishing) in a proactive process. Partners across the country have developed and are implementing voluntary programs, supporting hunters' choice of ammunition that interrupts the introduction of lead into food chains, including in AZ, UT, OR, and AK. Hunters in AZ have consistently maintained over 85% participation in voluntary, incentivized programs, even during periods where access to lead free ammunition was severely reduced. This program has provided many tons of clean food sources, or removed tons of remains that may have contained lead, helping to reduce lead exposure in CA Condors on the Kaibab plateau. Human dimensions work from across the country shows that hunters and other stakeholders are supportive of collaborating to find solutions that maintain democratic access to hunting, and adequately address current challenges faced by hunters attempting to choose actions that interrupt lead in food chains. These challenges include accessibility, cost, questions about performance, understanding of the process of lead exposure, and identification of lead-free options. A regulation without support for addressing these challenges is unlikely to be successful, and may result in a decline in trust and support for other conservation efforts.

Opportunities for Policy Leaders to Learn More

Adam Miller is the Partnership's NE Program Manager, and is in position to share information with stakeholders, including legislators on the topic of lead exposure in wildlife, effective communication and mitigation, and maintenance of the North American Model of Wildlife Conservation. If requested, MD DNR staff can work with Adam to provide an informational presentation and ballistics demonstration to committees or bill sponsors to better understand the complexities of this economic, social, and conservation challenge.

SB0634 Non Lead Ammunition.pdf Uploaded by: Nicholas Andraka

Position: UNF

SB 0634 Non Lead Ammunition

OPPOSE SB0634

Nicholas Andraka 5725 Saint Johns Chapel Rd Owings, MD 20736 <u>nickandraka@verizon.net</u> 410-693-3207

Committee Members,

I have been a Maryland hunter for decades; I am a member of Deer management with 2 counties, and a DNR trained Maryland Hunter Education instructor.

<mark>Key Take Aways</mark>

– You can eliminate all perceived lead contamination from deer hunting by having the hunters remove/bury the gut pile when they remove the entire deer from the woods. This is a No Cost solution to the cash strapped state.

 There is no Lead free ammo for the .22 Rimfire , this would end small game hunting with a 22 rifle

 Traditional muzzle loaders, many straight wall cartridge rifles and rifles older than 1975 will not shoot copper accurately and/or safely.

 High powered Rifles (11 counties) and shotguns slugs (the rest of the counties) work "ok" with copper projectiles and could easily be voluntarily transitioned to copper, eliminating 60-80% of lead used in MD hunting.

- I personally now shoot copper ammo in my 20ga slug gun and modern 45-70 rifle, as I have found copper based ammunition that works in these guns, this reduces my lead use by over 80%. This decision is based on my own research and education.

Summary:

Bald Eagles in the Chesapeake region have gone from ~60 breeding pairs in 1970s to over
 3000 pairs in 2020, in fact They are at or above carrying capacity in many areas.

- Lead is present in the paints of the bay's bridges and structures, industrial run off, Gizzard shad, Blue catfish and many other fish that Eagles eat and the sediment of the bay. There has been no Maryland study showing a connection between hunting and lead poisoning of Raptors. - Maryland hunters remove the entire deer from the woods after shooting it, currently only the gut pile is left,, a simple solution to alleviate contamination fears would be to bury the gut pile or remove it with the deer,, <u>That simple step would 100% ensure there was no chance of lead left behind.</u> If this simple step is not considered over banning lead ammo for deer hunting,, it shows the true intent of this legislation.

- A lead ban, would be a ban on small game hunting with a 22 rifle. There is currently no lead free alternative being manufactured. Many companies have introduced a lead free 22 bullets, and quickly discontinued them as they do not function properly in most 22 rifles. There is nothing indicating that hunting small game with a 22 rifle is a source of lead poisoning to other animals.

Lead bullets do not fragment moving at the slow speeds of the typical 22 rimfire.

- A lead ban would be a ban on many Traditional Muzzle loading rifles used in the primitive season, as they require a soft lead round ball.

- A lead ban would be a ban many older deer rifles. Copper bullets require a longer bullet at higher velocities; many older rifles have barrels that have a slower twist that will not stabilize copper bullets.

- A lead ban would ban a few modern deer rifles as the copper rounds will not produce the required energy (Foot/Pounds) required by law to deer hunt in Maryland – Such as the 357 and 44mag lever guns that are now popular.

- Those pushing these "Lead Hunting Bans" have offered no legislation to clean up the industrial, commercial, governmental heavy metal (Lead) pollution in the Chesapeake Bay. This legislation has nothing to do about lead, but all to do about reducing hunting.

- Last year (2024) I testified on this lead ban in the MD Senate (SB983), in the days after my testimony I was in phone and email discussions (with the authors and promoters of the lead ban) about the reduction of lead in hunting. I offered ideas and ways to reduce the use of lead by up to 80% without banning and putting undue hardship on hunters, In the end They had no interest in that. They only wanted a total ban, showing this is not about lead reduction, but reducing hunting participation in Maryland.

- Education is key, Western states have had a reduction in the use of lead based ammo (where it is feasible) through Education, outreach, and incentives. Maryland has not even attempted The education route,, as that is not the goal of this legislation.

Details:

As noted above, The Bald Eagle population in the Chesapeake region has gone from ~60 breeding pairs in 1970s to over 3000 pair in 2020.

(The following are clips from a "Bay Journal article and WTOP Melissa Howell interview) According to Bryan Watts, founder and director of the Center for Conservation Biology at Virginia's College of William and Mary, who has authored dozens of academic papers on bald eagles over a more than 30-year career:

"Eagles have shown themselves to be more adaptable than we expected," But now, he says, they seem to be running out of room in the Bay region. The most notable consequence has been the growing population of so-called "floaters," breeding-age eagles of either sex with no territory of their own. The crowding has become so intense that researchers now believe that the floater population is six to eight times greater than the breeding population. Breeding males that do have nests and mates find themselves at near-constant threat of losing them to intruders. "These things can be bloody fights to the death". "It's a jungle out there for these birds." "Food supply for eagles hasn't been able to keep up and infighting has become common, the professor said. Watts added that the population began to reach its limits". "The young were starving in the nest,"

As I noted in the Summary, Lead is present in many aspects of the Chesapeake Bay, It is in the sediment base, it is in the fish the Eagles eat, A major source is the paint in the bridges over/around the bay, often where Eagles perch/nest, It comes from runoff from active industrial sites and military installations that are prevalent in the bay region. Eagles exposure to lead is NOT from hunters. https://pubmed.ncbi.nlm.nih.gov/30698866/

-22 Rim fire rifle ammo.

Another year passed since we last visited this subject ,, There were 3) .22 rimfire "non lead" cartridges made in the last few years. <u>ALL</u> have been discontinued. They were CCI Copper, CCI Meat Eater and Norma Eco speed/Power.

They all failed because they were highly inaccurate and ineffective, they did not expand and were traveling to fast for commercially available 22 rifles.

The physics do not work when down scaling and will not work.



RE: Contact Us : Technical Services/CCI

cciexpert [cciexpert@VistaOutdoor.com]

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Nicholas,

CCI Copper 22 was discontinued about 2 years ago.

Thanks,



Cody Barker Technical Service Rep. 2299 Snake River Ave. Lewiston, ID 83501 Office: 866-286-7436



Ammunition / Rimfire Ammunition / 22 Long Rifle

Norma Eco Speed-22 22LR Ammo 24 Grain Plated Flat Nose



CCI Copper-22 Ammunition 22 Long Rifle 21 Grain Copper Hollow Point Lead-Free

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- Marylands "primitive deer season" makes use of traditional muzzle loading rifles ,, these rifles will only function with soft lead round balls. This legislation would ban these weapons.

- Some older rifle such as 3030, 35rem, 44m lever action have a slower twist roughly 1:38,, while newer guns rifles of these calibers have a faster 1:20 twist rate. The slower twist rate will not stabilize the longer copper bullet.

- Some MD legal rifle calibers just make it energy wise with a lead projectile, with the larger copper bullet, there is less room for gunpowder in the cartridge and the bullet will not have the energy to make a clean, ethical kill. (357M, 44mag)

Maryland deer regulations require a rifle/ammo produce a minimum energy of 1200 FT/LB of energy, I personally will not shoot a deer with less than 1500 FT/LB.

Some of the more popular SWC Lever action rifles bought by MD hunters do not have a copper ammo that meets this min requirement.

I purchased a Henry 44m lever action rifle last year (\$1200),

There is only 1 commercially available 44 copper base ammo that is advertised to meet the 1200 FT/LB min. (that min is marginal, 1500 is my bottom), And that bullet is to light in weight at 162 grain (vs 240g standard), most of the copper based 44m ammo is advertised at 900-1000 FT/LB. Same goes with 357m rifles.

It is physically impossible for a copper bullet to achieve the energy levels in these carbine cartridges. And if they did, they would not expand to transfer that energy.

- Shotguns and larger Straight Wall Cartridge (SWC) rifles: do to the size of these cartridges, there is limited manufacture of copper based cartridges that adequately function in them, They are expensive and of limited supply. They will not work in every shotgun/rifle,, but many hunters I know use them for personal reasons.

- High Powered centerfire rifles: in the MD counties that allow High Powered Rifles, many hunters are using/switched to solid copper bullets, as at these high speeds and power they do function as good as lead based bullets.

- As I laid out above,, any possibility of lead contamination in deer hunting, can be 100% eliminated by removing the gut pile with the deer.

.22 Rimfire will never function properly without a lead bullet.

There are many cases where copper solid bullets will work fine for deer hunting.

Copper works fine for High powered rifles used in 11 counties, and works "ok" with shotgun slugs used in the remaining counties. If these weapons transitioned to copper, that would cover 60-80% of lead used in hunting.

I suggest Maryland work on adding Education and outreach to easily reduce hunter lead use by over 50%

For these reasons I OPPOSE SB0634

Nicholas Andraka

SB0634 William Harbold written testimony.pdf Uploaded by: William Harbold

Position: UNF

William Harbold 429 Myers Road Westminster, MD 21157 waharbold@gmail.com 443-789-8404

28 February 2025

Maryland State Senate Annapolis, MD

To whom it may concern:

I am a Maryland resident and a lifelong hunter, and I do not support this bill, specifically the section pertaining to the phasing out of lead ammunition for hunting in Maryland. As far as I can tell, this is an attempt toward a functional ban on hunting with firearms in our state. I do not have an opinion on the portions of this bill that pertain to fox chasing or the deer management assistance program.

Phasing out the use of lead ammunition would effectively ban small game hunting with a .22 caliber rim-fire rifle, as there are currently no lead-free alternatives. This would leave only shotgun shells loaded with steel shot as the only option for small game hunting, making the pursuit significantly more expensive.

This bill, if passed, would effectively ban the use of traditional muzzle-loading rifles, as they use entirely lead ammunition. This would keep me from participating in any of Maryland's muzzle-loader deer hunting seasons, as I do not own or hunt with any modern muzzle-loaders that are capable of using non-lead ammunition.

If this bill becomes law, it will severely restrict the number of calibers/gauges available for deer and bear hunting with center-fire rifles and shotguns. Many older rifles with slower twist barrels will not stabilize longer copper (non-lead) bullets, and in many cases, there is no non-lead ammunition made for them. For example, there are no commercially available non-lead loads in 30-30 Winchester (one of the most popular whitetail deer cartridges and one that I hunt with almost exclusively during Maryland's firearms seasons for whitetail deer) and there is only one non-lead shotgun slug available, which itself is not compatible with many older shotguns.

This bill will do little to nothing to improve the health and safety of Marylanders and instead will make it difficult if not impossible for Marylanders who hunt with firearms to continue their traditional pursuits to recreate, feed their families, and assist in managing Maryland's wildlife populations.

I ask that you please vote against this bill or at least amend it to exclude the phasing out of non-lead ammunition.

Thank you for your consideration.

William Harlold

William Harbold