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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 Maryland 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. Zhanley, B. J. et al. (2021). Environmental lead reduces the resilience of bald eagle populations. *The Journal of Wildlife Management*, 86(22177).
3. Watson, J.W., and Davies, R.W. (2015). Lead, Mercury, and DDE in the Blood of Nesting Golden Eagles in the Columbia Basin, Washington. *The Journal of Raptor Research*, 49(2). Pp.217-221.
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>
7. Palmer, A.G. et al. (2022). Blood Lead Concentrations of Free-ranging North Florida Raptors: 2008-2017. *Journal of Wildlife Diseases*, 58(2).
8. <https://pubs.usgs.gov/fs/2009/3051/pdf/fs2009-3051.pdf>
9. 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>