

Why Should a Ban on Lead Fishing Sinkers be Reconsidered?



Photo by Debbie Hartmann

Lead is deadly to wildlife in Minnesota:

- Many states have banned lead for use in fishing and hunting (ME, NH, NY, VT, MA)
- In MN, lead bans have been proposed numerous times but have been defeated
- Banning lead in fishing sinkers and tackle does not prohibit fishing; safe alternatives to lead work well and are widely available (but could be more so)

Cost Difference:

1 lead sinker: 10¢ - 25¢

1 nonlead, environmentally-safe sinker:
7¢ (tin) - 65¢ (tungsten worm weights)

Poisoning wildlife is also expensive:

- Lead sinkers and shot accumulate on stream and lake beds and are selectively picked up by birds to grind food in their gizzard. Lead is soft, so it is ground up and incorporated into body tissues. When a bird dies of lead poisoning in this manner, they become a poisoned carcass in the landscape that will also poison scavengers and pets that feed on it.

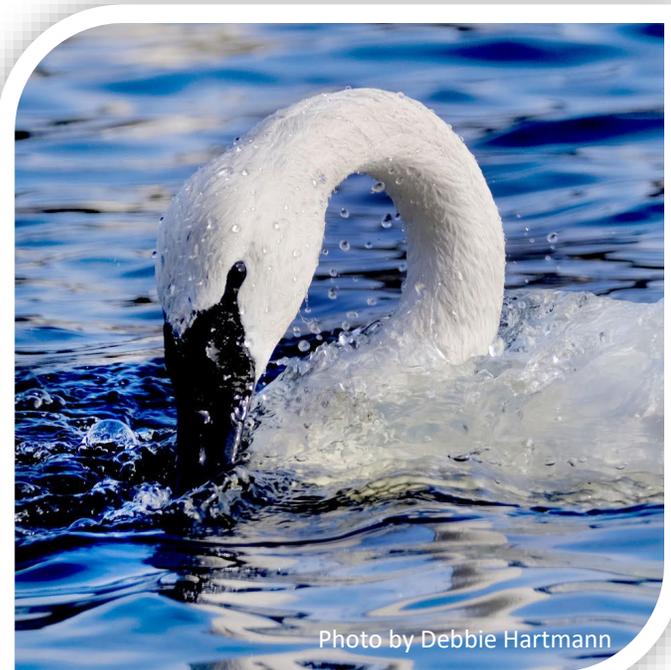


Photo by Debbie Hartmann

Trumpeter Swans in MN:

- Only 6-8 pairs of trumpeter swans remained in MN in the 1980s. They had been nearly extirpated since the 1880s.
- Cost for swan reintroduction & restoration in MN = \$515,000
- Swan population in MN = ~30,000 (MN DNR)
- Swans congregate in open-water areas in the winter. At Sucker Channel, more than 150 birds are often observed at a time (winter 2021).



Photo by Debbie Hartmann

Sucker Channel, Vadnais Heights Resident alerts and results:

- During winter 2019, a resident reported finding dead swans to the Vadnais Lake Area Water Management Organization (VLAWMO).
- A total of 11 swans died in the same location over a couple of weeks.
- VLAWMO staff monitored the site starting in 2019 and continuing to present, documented and reported a minimum of 20 swan deaths (as of 2021), and brought 10 carcasses to the UMN Veterinary Diagnostic Center for testing with support from MN DNR.
- All tested swans have been confirmed to have died of lead poisoning.
- Because of social media, Pioneer Press, Star Tribune and others, additional reports have come in, consistent with lead poisoning, with swan carcasses concentrated at high-use fishing areas or places with high amounts of lead shot.
- Lead poisoning in the environment is not rare. The Wildlife Rehabilitation Clinic, Roseville, MN, regularly documents lead toxicity, and numbers continue to rise.
- Lead sinkers can do harm for years and even decades.
- Over 4,400 tons of lead fishing sinkers are sold each year in the U.S. (USGS, 2008).



Photo by Dawn Tanner



Minnesota Herpetological Society

PO Box 130366, Roseville, MN 55113

Peter Strohmeier
Committee Administrator
Minnesota House of Representatives
Environment and Natural Resources Finance and Policy Committee
Peter.Strohmeier@house.mn

February 20, 2021

Dear Mr. Strohmeier,

The Minnesota Herpetological Society (MHS) represents over 300 members and supports a wide variety of programs aimed at amphibian and reptile education and conservation in Minnesota and beyond. In recent years there has been a growing body of evidence that accidental hooking of turtles can result in hook-induced injury, lead poisoning, and death (Borkowski, 1997; Steen et al., 2014).

Turtles are one of the most imperiled groups of wildlife in the world, and a large body of research has found that even small increases in mortality of adult turtles – especially females – can have unsustainable impacts on turtle populations over the long term (Lovich et al., 2018).

The MHS is currently working on a variety of efforts to address threats facing Minnesota's turtle fauna, including road mortality and commercial turtle harvest. Given the increasing evidence that fishing tackle is problematic for turtles, and the fact that lead is highly toxic to wildlife when ingested, the MHS supports the efforts of HF 157 to reduce risk of lead exposure to protect Minnesota's wildlife.

Sincerely,

Christopher E. Smith, M.Sc., CWB®
Chair, Conservation Committee
Minnesota Herpetological Society
conservation@mnherpsoc.org

Literature Cited:

Borkowski, R. (1997). Lead Poisoning and Intestinal Perforations in a Snapping Turtle (*Chelydra serpentina*) Due to Fishing Gear Ingestion. *Journal of Zoo and Wildlife Medicine*, 28(1), 109-113.

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THE TRUMPETER SWAN SOCIETY

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Assuring the vitality and welfare of wild Trumpeter Swans since 1968

Peter Strohmeier
Committee Administrator
Minnesota House of Representatives
Environment and Natural Resources Finance and Policy Committee
Local Government Division
430 State Office Building
St. Paul, MN 55155
Peter.Strohmeier@house.mn

February 19, 2021

Dear Mr. Strohmeier,

The Trumpeter Swan Society supports proposed Minnesota bill HF 157 to phase out lead sinkers and jigs that weigh one ounce or less or measure 2-1/2 inches or less in length. While the proposed legislation focuses primarily on reducing loon mortality from lead, the phase-out of lead fishing tackle would also have significant wildlife health benefits for Trumpeter Swans and other wildlife.

Lead poisoning is a significant health and mortality issue for Trumpeter Swans across North America, including Minnesota. Throughout their annual cycle, Trumpeter Swans feed in wetlands, rivers and lakes often where fishing and hunting have occurred for decades. Lead sinkers, jigs and other lead tackle continue to be added to these natural areas. The toxicity in even one lead sinker can slowly kill an adult Trumpeter Swan over just a few weeks as paralysis and other changes to body systems occur when lead is absorbed into the blood stream and organs.

While lead that has been unintentionally deposited in the environment over decades by hunters and anglers remains, it is important to stop adding to it. It is important for wildlife health. Ending this also aligns with the high value Minnesota citizens place on the state's natural resources and heritage. As Carrol Henderson, retired MN Department of Natural Resources Non Game Wildlife Program supervisor, and Board Member of The Trumpeter Swan Society recently wrote in *Outdoor News*, "The sight of a pair of loons feeding their chicks, the sound of loons at night as we enjoy s'mores on shore with our family, or the incredible sight of trumpeter swans winging overhead are part of our Minnesota outdoors that we can all help perpetuate by using nontoxic fishing tackle."

Sincerely,

Gary Ivey, Phd., President

Meeting with DNR Commissioner Sarah Strommen

Thursday February 6th 1:00 pm.

Free Voluntary AIS Highway decontamination and AIS education stations

Proposing a Pilot Program for 2021 consisting of three AIS Highway Cleaning station located in Alexandra, Brainerd and Virginia MN. These stations would utilize Highway signs and State Rest stops, offering Free AIS cleaning and education at three rest stops (to be determined). Stations would be operated by the MN DNR in conjunction with partnering Counties (if they wish to do so).

A legislative Bill could be developed to grant some sort of immunity to AIS violations if they are discovered at the locations and the watercraft is thoroughly decontaminated. The purpose of this Pilot Project would be to assess how the general public would participate in voluntary decontamination and education sites. If this Pilot would be considered, future steps to design, implement, fund and obtain partnerships would begin.

AFH on (Draft Lead) Fishing Tackle

AFH recognizes that lead fishing tackle is toxic to waterfowl, the extent of mortality is made difficult inasmuch because the mortality occurs in the wild. Forests, swamps, lakes and fields, added to this are the carrion predators who quickly dispose of the remains. To some it isn't the severity or numbers of waterfowl lost but the magnitude of the tasks and costs to remove lead from tackle. Yet the issue is contentious within the environmental, conservation and angling groups. Banning lead tackle means re-educating anglers to practices that date back for generations. To accomplish a re-education we will need; Tackle manufacturers, retailers, lake associations, conservation organizations, sports enthusiasts, anglers and governmental action. Even in States that have enacted bans lead tackle is available in retail markets and freely sold via the internet. Overall States with bans are trying to limit the ingestible small sinkers and jigs, some more than others. Anglers for Habitat would support a ban on some sizes and types of lead tackle provided it encompasses a gradual transition to other metals. Tungsten, Bismuth, Zinc, Tin, Copper and Steel are already commonly used by anglers. Bismuth/tin sinkers and splitshot, tungsten jigs for both summer and winter fishing could replace their lead equivalents. Even without an outright ban, AFH would support better efforts to keep discarded, damaged or unwanted lead tackle out of lakes and landfills. We recommend practices that make disposal easier and convenient.

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February 19, 2021

RE: Support for HF157 (Fischer): Lead tackle sale, manufacture and use prohibition

Representative Rick Hansen

Environment and Natural Resources Finance and Policy, Minnesota Legislature

Dear Representative Hansen and committee:

I write to express my strong support of HF157 to ban the use of lead from Minnesota's invaluable aquatic ecosystems. I write as a citizen but I think I am a well-informed one, as I am a PhD fisheries scientist and professor with over 30 years of experience studying the well-being of Minnesota's fishes and aquatic environment at the University of Minnesota. I also have had the honor of teaching the majority of the state's fishery biologists that come from instate. Fish health and toxicology is specialty of mine and I am one of only a few in the state.

Please make no mistake about it: lead is exceedingly toxic to all creatures with a backbone: fish, birds and people. If ingested, and this can happen by many routes, many unintended, it destroys nervous systems at very low concentration; there is no safe level. Further, it does not degrade but actually bio-accumulates. This has convincingly been shown in hundreds of peer-reviewed articles. Fortunately, there are safe and reasonably priced alternatives to lead fishing tackle which also now used by many other states. In my opinion, it is grossly irresponsible to not take all action possible to reduce the use and release of all lead into our environment.

Thank you for attention to this critical matter.

Yours sincerely,



Peter Sorensen
Soren003@umn.edu; 651-647-0079
Department of Fisheries, Wildlife & Conservation Biology
University of Minnesota
(Writing as a private citizen)

Groups like the MN Izaak Walton League (Ikes), National Wildlife Federation and the Wildlife Society, strongly support moving to non-toxic angling tackle. This rationale is both a moral and ethical imperative.

In our democracy, hunters and anglers carry out their activities under the increasingly watchful eye of the non-hunting/non-angling public. While some States have passed legislation, or citizens have passed constitutional amendments, guaranteeing the right to hunt and fish, this right is always subject to the will of the people. As a minority within the American public, hunters and anglers should not take these rights for granted. To ensure the long-term viability of these activities, hunters and anglers must continue to be seen by the public as carrying out their sport using the most ethical means available. Therefore, we need to be seen as leaders, striving to eliminate unnecessary collateral damage to all species of wildlife. We cannot and should not wait until wildlife populations are threatened to question our standard practices and make these necessary reforms.

Historically, the image portrayed by many hunting and angling groups, was that they have been largely responsible for the restoration and protection of our natural resources, in particular America's fish and game. They are among our original conservationists. This image is not well served when dead and dying wildlife are brought to rehabilitation centers suffering for lead poisoning attributable to lead fishing tackle. Our wildlife is shared by all citizens, whether they are outdoorsmen or not. Birds such as condors, eagles and other birds of prey, as well as loons and swans, are long-lived species with limited reproductive capacity. Dying from lead sinkers and jigs when there are effective and affordable alternatives, is frankly unacceptable. Lead is a powerful neurotoxin, capable of inflicting unintentionally injury and death on those species that inadvertently consumes it.

Some may argue that the transition to non-toxic alternative is already happening, or that it can be done through education and a self-motivated voluntary switch in consumer purchasing. Both arguments have for decades failed to move consumers to the switch to non-toxic alternatives to any significant degree. We've given this method a try, and it has failed. It is time for elected officials to step in and provide regulators with the legal tool(s) necessary to end the sale of toxic lead tackle.

The Minnesota Ikes would like to see the State continue to eliminate lead in both fishing tackle and sporting ammunition. The proposed bill, HF 157, would move us half way there, by transitioning the fishing community and tackle manufacturers slowly away from lead to currently available alternative materials, such as tungsten.

Summarizing our position, lead is a known neurotoxin. Efficient and cost competitive alternatives for lead fishing tackle are available, and should be the standard all fishermen adopt. Voluntary efforts have, and will continue to fail to significantly move anglers to non-toxic alternatives. Finally, banning the use of lead in favor of utilizing non-toxic alternatives through passage of HF 157 will protect the state's wildlife, and the moral high-ground staked out by hunters and anglers throughout history.

Craig Sterle
MN Division Past President
The Izaak Walton League of America
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Friends of Minnesota Scientific & Natural Areas

February 22, 2021

Representative Rick Hansen, Chair
House Environment and Natural Resources Finance and Policy Committee
Via e-mail only: Peter.Strohmeier@house.mn

Re: Support of HF157 – A Bill to Phase Out Lead Fishing Tackle

Hearing Date: Tuesday, February 23, 2021; 1:00 p.m.

Dear Chair Hansen and Committee Members:

Friends of Minnesota Scientific and Natural Areas (FMSNA) is a Minnesota non-profit, tax-exempt [“501(c)(3)”] corporation organized to protect and enhance Minnesota’s Scientific and Natural Areas (SNAs). SNAs are the crown jewels of Minnesota’s state land base, protecting some of Minnesota’s rarest and most sensitive plant and animal species and the ecosystem upon which they depend.

Many of Minnesota’s 160+ SNAs are adjacent to water bodies that allow fishing. Lead fishing tackle continues to adversely impact the natural resources on – and adjacent to – these SNAs.

Our organization fully supports HF 157 - your bill to phase out lead fishing tackle – introduced by Representative Peter Fischer.

The science is indisputable; the deposition of lead in the waters of the state has significant adverse effects on the environment. Annual tackle loss translates into many metric tons. Lead, entering lakes, rivers and wetlands, is absorbed or ingested by fish, aquatic organisms and waterfowl such as loons and swans resulting in well documented negative effects. There is no scientifically established safe level of lead exposure.

As a top producer of loons in the lower 48 states, limiting further lead deposition in Minnesota’s wetlands and wildlife habitat is especially important. Many other states in the common loons breeding range have already prohibited some level of lead use or sale.

The Minnesota Chapter of the American Fisheries Society’s “Lead Fishing Tackle Position Statement” (adopted February 1, 2021) is a call to action to restrict the use of lead tackle. (See attachment.)

Public education efforts to achieve voluntary use of non-toxic tackle have failed to affect meaningful change. Non-toxic alternatives are available to anglers. Although educational efforts to increase public awareness remain important, **legislation**, such as HF 157, **is required to adequately address lead tackle pollution**.

Finally, we urge wildlife professionals and organizations, fishing tackle manufacturers, retailers, anglers, policymakers, and the general public to **work together** to effectively implement these lead tackle restrictions.

Thank you for all of your excellent work to protect Minnesota's natural resources – and for **your vote in favor of HF 157**.

Very truly yours,

Thomas E. Casey

Thomas E. Casey
Board Chair
Friends of Minnesota Scientific and Natural Areas, Inc

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cc: Rep. Rick Hansen, via e-mail: rep.rick.hansen@house.mn

Attachment: "Lead Fishing Tackle Position Statement" (adopted February 1, 2021) – MN
Chapter of American Fisheries Society



**MN Chapter of the American Fisheries Society
Lead Fishing Tackle Position Statement
Adopted by MN AFS February 1st, 2021**

The Minnesota Chapter of the American Fisheries Society acknowledges that there is **conclusive scientific proof that lead (Pb) is highly toxic to fish, wildlife, and humans.** Based on the scientific evidence and the chapter's desire to protect ecosystems, **lead should not be added to the environment in Minnesota.**

Lead is commonly used in fishing tackle in Minnesota where it is readily available and inexpensive. In lakes with high angling effort, **annual tackle loss translates into many metric tons of lead** (Radomski et al., 2006). Lead entering lakes, rivers and wetlands is toxic to animals that comprise these ecosystems. Lead is both ingested and absorbed from the water by fish and other aquatic organisms. Species are more susceptible in water with lower pH levels, which are expected to trend lower with climate change. Waterfowl such as loons and swans are especially affected by lead, resulting in well documented negative population-level effects (Grade et. al 2017). A single lead sinker can kill a loon¹. Lead is also highly toxic to anglers, especially young children who may handle or consume it accidentally. **There is no scientifically established safe level of lead exposure.**

The seemingly universal nature of lead's toxicity to animals can be attributed to its close resemblance to elemental calcium, which plays many critical roles in animal physiology. Hundreds of peer-reviewed articles document the damaging effects on the physiology, behavior, and biochemical functions of a wide variety of species at very low levels. Lead affects the central nervous system, peripheral nervous system, hematopoietic system, cardiovascular system, and various organs in vertebrates. Neural development and function (e.g. neurotransmitter release, synaptic function, myelin sheath formation), immunity (antibody formation), and enzymatic function are also all jeopardized by lead exposure (Lee et al., 2019). Lead does not degrade, and it bio-accumulates in food chains. Its effects are both immediate and long-term, extremely severe, and affect organismal development and ecosystem functions in irreversible ways that are not yet fully understood.

To limit lead exposure and its detrimental effects on wildlife and human health, lead was banned in America's gasoline, paint, waterfowl ammunition in federal refuges, and many other materials decades ago. Furthermore as of 2019, six states (ME, MA, NH, NY, VT, and WA) enacted regulations banning the sale and/or use of lead in fishing tackle of specific smaller

¹ Latest statistics from necropsy of Minnesota loons showed a lead poisoning rate of 14%, and based on these and other data, it is estimated that 100 to 200 loons die per year from lead fishing tackle in Minnesota (Carrol Henderson, retired nongame wildlife supervisor for the Minnesota Department of Natural Resources).

sizes. The national market for non-toxic fishing tackle has increased substantially; many companies are already producing tackle from tungsten, ceramics, glass, bismuth, steel, and tin. In Minnesota, while various groups have called for banning lead in fishing tackle and ammunition for decades, the Minnesota State Legislature which has the authority to create such regulations has yet to act. The Minnesota Pollution Control Agency funded a very ambitious public outreach campaign, and citizen groups and professional organizations have advocated for reducing the use of lead tackle through public education, but still these and similar education efforts have failed to affect meaningful change. Effective solutions to lead tackle pollution require a socio-political response (Grade et al., 2019). While non-toxic tackle is viewed by some as expensive, as supply for non-toxic tackle increases, prices for non-toxic tackle will decrease, as with other products.

The MN AFS stands with citizens and professional, science-based organizations in calling for action to restrict the use of lead tackle in Minnesota with the intent to remove it from usage this decade. This action will lead to safer alternatives which protect ourselves and the environment. Accordingly, strict restrictions on lead tackle in Minnesota are warranted, and the MN AFS Chapter recommends the following actions:

1. Provide policy makers with facts and references on lead tackle issues related to topics including aquatic toxicology, fisheries management, angler behavior, lead fishing tackle and alternatives, and legislation on fishing tackle in other states.
2. Promote and assist with educational efforts that increase public awareness, understanding of the consequences of lead exposure to anglers, wildlife, and fish, and identify reasonable alternatives.
3. Collaborate with fish and wildlife professionals and their various organizations, as well as fishing tackle manufacturers, retailers, anglers, policy makers and the general public to enable restrictions on lead tackle while strongly encouraging the use of non-lead fish sinkers and jig heads.

Literature Cited

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- Lee, Ju-Wook, H. Choi, U-K. Hwang, J-C. Kang, Y. J. Kang, K. I. Kim, and J-H. Kim. 2019. Toxic effects of lead exposure on bioaccumulation, oxidative stress, neurotoxicity, and immune responses in fish: A review. *Environmental Toxicology and Pharmacology* 68:101–108.
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**TESTIMONY FROM CARROL HENDERSON
IN SUPPORT OF H. F. 157 PHASING OUT MANUFACTURE, SALE,
AND USE OF SMALL LEAD FISHING JIGS AND SINKERS.**

**THIS IS OUR CHANCE TO HELP PROTECT
MINNESOTA'S LOONS FROM LEAD POISONING!
FEBRUARY 23, 2021.**

My name is Carrol Henderson. I appreciate the opportunity to testify in support of H. F. 157 which would phase out the manufacture, sale, and use of small lead fishing jigs and sinkers over the next three to four years. I strongly support this proposal and feel it is long overdue. I served as the Minnesota DNR Nongame Wildlife Program supervisor from 1977 through 2018. I have been involved with research, management, and education activities related to lead poisoning in Canada geese, bald eagles, common loons, and trumpeter swans from 1977 through 2018. I have been involved in advocacy for use of nontoxic fishing jigs and sinkers since the Minnesota Pollution Control Agency first initiated their "Get the Lead Out" program in 2000. I now serve on the Boards of the National Loon Center and The Trumpeter Swan Society.

We have seen a significant increase in the awareness of wildlife-related problems caused by lead as an environmental pollutant over the past 30 years. The use of lead in fishing sinkers and jigs continues to be a source of toxicity for some of Minnesota's most iconic wildlife including common loons, trumpeter swans, and even bald eagles. This problem has been partially addressed in some states, mainly out of concern for lead poisoning in loons, by passage of restrictive legislation in New Hampshire, New York, Maine, Massachusetts, Vermont, and Washington. New York passed its legislation in 2004—17 years ago! In general, these states prohibit use, manufacture, and or sale of small jigs and sinkers under one ounce and less than 2 ½ inches long. What's taking so long for us to follow their lead?



Waterbirds are poisoned by lost fishing tackle. When lead jigs and sinkers fall to the lake bottom, they retain their toxic qualities for many decades—they do not rust, degrade, or disintegrate. Loons, swans, ducks And geese regularly dive to the bottom of lakes and marshes to pick up pebbles that they retain in their gizzards to grind up their food. If they accidentally swallow even one split shot or jig, they die. The above photo shows the pebbles salvaged from the gizzard of a dead Minnesota loon. The size of the pebbles is similar to the size of small jigs and fishing sinkers. Loons also get lead poisoning by ingesting fish carrying lead jigs and sinkers and by swallowing fishing jigs being retrieved by anglers.

The death these of loons, swans, ducks, and geese creates another problem. Dead waterbirds can attract bald eagles to scavenge on the carcasses. They could become a victim of secondary lead

poisoning. This is a toxic food chain that can be avoided by use of nontoxic tackle. In the nongame wildlife program we solicited dead loons from the public so we could determine “why loons died.” We received about 25-30 loons per year for necropsy. Lead poisoning was determined to be one of the top three causes of loon mortality (in addition to intraspecific territorial fighting and collisions from boaters).



Lead poisoning caused by fishing tackle is a cumulative problem. More lead is added to our lake bottoms every year. In 2003 DNR biologist Paul Radomski published a paper that estimated nine tons of lead tackle were lost by anglers in Mille Lacs Lake over a 20-year period. Assuming a similar rate of deposition since then, another eight tons of lead have been lost at the bottom of Mille Lacs Lake since 2003. If we treasure our lakes, we should not be treating them as perpetual dumping grounds for lead fishing tackle.

There are concerns that the nontoxic tackle is too expensive. However, a US Fish and Wildlife survey of expenditures by Minnesota anglers, published in 2011, revealed that they spent about \$1,500/year/angler for fishing. That included about \$240 in annual equipment expenditures. Suppose a person spends about \$50/year for a selection of nontoxic jigs and sinkers. That is less than five per cent of the total cost of their expenditures for fishing. Compared to the cost of boats, motors, gasoline, lodging, and other gear, the cost of those nontoxic jigs and sinkers is “peanuts.” Also, the cost for nontoxic tackle should be expected to decline over time as production accommodates increased demand.

The Minnesota Pollution Control Agency has been a leader in actions and advocacy for using nontoxic fishing tackle. They have an outstanding “Get the Lead Out” program underway and a website with lots of great information about lead-free options for fishing, including a list of 65 manufacturers that exclusively offer nontoxic fishing jigs and sinkers. This is a huge “green” manufacturing and marketing opportunity for these businesses to demonstrate their advocacy for preserving our fishing traditions while protecting wildlife. They have already demonstrated great creativity and initiative in developing jigs and sinkers from bismuth, tungsten, tin, glass, pewter, steel, stone, and metal composites.

One of the most serious difficulties to get buy-in for nontoxic tackle is a “doom-loop” phenomenon. Anglers who go to a bait shop or outdoor retailer and request nontoxic tackle are frequently told “there is no demand so we don’t carry it” or the sales clerk doesn’t know if they carry it. Or, if so, they don’t know where it is. Manufacturers are coming out with greater variety and volume of nontoxic tackle, but retailers have not done an adequate job of carrying it, advertising it, or promoting it. They don’t understand that all Minnesotans have a stake in protecting our loons, including anglers. They need big signs saying “LOON SAFE” and “SWAN SAFE” above a

designated Nontoxic Fishing Tackle Display. Perhaps the MPCA could copyright a “Loon Safe” logo that could be approved for use on the logos and advertising for nontoxic tackle packaging.

We are desperately in need of coordination and collaboration among manufacturers, retailers, anglers and angling groups—but it hasn’t happened. Frankly, we need the enactment of H.F. 157 to make it happen. It is worth recalling that there was a lot of “heartburn” by waterfowl hunters in 1987 when Minnesota began requiring nontoxic shot for all waterfowl hunting in the state. While there were early issues with performance of steel shot, the ammo industry eventually developed outstanding nontoxic loads for waterfowl hunting, and hunters have adapted well to those nontoxic alternatives. It was the right thing to do.

Anglers now have an opportunity “shed lead” to demonstrate that they care about all wildlife-as they enjoy their fishing adventures. Many anglers practice “catch and release” to demonstrate their conservation ethics, but for loons, swans, and eagles with lead poisoning, there is no catch and release. They eat lead and they die. H.F. 157 is a targeted solution to this problem that has already been proven in other states. It only applies to smaller jigs and sinkers, and it allows three to four years to be phased in. If we don’t get this legislation passed now, our “doom-loop” is likely to continue for another 20 years.



I thank you in advance for your support of H. F. 157. I think Minnesota’s citizens would sincerely appreciate your support for protecting our state bird, the common loon, through enacting this legislation. This legislation would not impair the opportunity for enjoying our fishing heritage. Loons are a treasure worth protecting, and they are much more beautiful on our lakes than upside down on a necropsy table.



Minnesota Center for Environmental Advocacy

February 23, 2021

I am submitting this letter on behalf of the Minnesota Center for Environmental Advocacy (“MCEA”) in support of HF 157 (Fischer) which restricts the sale and manufacture of lead sinkers and jigs of a certain size. MCEA is a nonprofit organization with almost 50 years of experience using law and science to protect Minnesota’s environment.

Every year, common loons—our iconic state bird—die as a result of lead poisoning. Similarly, every year trumpeter swans die from lead poisoning. Researchers have estimated that 10%-50% of common loon mortalities result from ingestion of lead jigs and sinkers.¹ A 2017 study in the *Journal of Wildlife Management* documented that these deaths deplete the common loon population as a whole.² Similarly, the Minnesota Department of Natural Resources estimates that 40 percent of trumpeter swan deaths are caused by lead poisoning.³ Based on the common loon study, it is likely that these unnecessary deaths are also having population impacts, and that other species are probably affected.⁴

Additionally, lead tackle is a public health issue. Children can ingest lead sinkers⁵ or absorb lead from handling lead tackle.⁶ Workers manufacturing lead tackle can become contaminated, and can bring that lead back to their families.⁷ These same workers can and do make environmentally-friendly unleaded sinkers.⁸

Angler education programs encouraging the use of non-lead alternatives are helpful, but have not proven to be enough. So long as lead fishing tackle remains available, people will buy it because it is there, and they assume it is safe. We thank the author for taking action on this issue.

Ann E. Cohen
Senior Staff Attorney
Minnesota Center for Environmental Advocacy

¹ Population-level Impacts from Lead Fishing Tackle Ingestion by Fish and Wildlife Species in North America: A literature review, available at: https://www.fishwildlife.org/application/files/9515/3719/5026/AFWA_Lead_Fishing_Tackle_Review_2018_FINAL.pdf

² Tiffany J. Grade, Mark A. Pokras, Eric M. Laflamme, Harry S. Vogel. Population-level effects of lead fishing tackle on common loons. *The Journal of Wildlife Management*, 2017; DOI: 10.1002/jwmg.21348 Wiley. “Lead fishing tackle may be threatening loon populations.” *ScienceDaily* 12 October 2017. [sciencedaily.com/releases/2017/10/171012163926.htm](https://www.sciencedaily.com/releases/2017/10/171012163926.htm)

³ <https://www.mprnews.org/story/2019/03/30/report-trumpeter-swans-died-from-lead-poisoning>

⁴ https://www.fishwildlife.org/application/files/9515/3719/5026/AFWA_Lead_Fishing_Tackle_Review_2018_FINAL.pdf

⁵ <https://jamaneetwork.com/journals/jamapediatrics/fullarticle/189533>

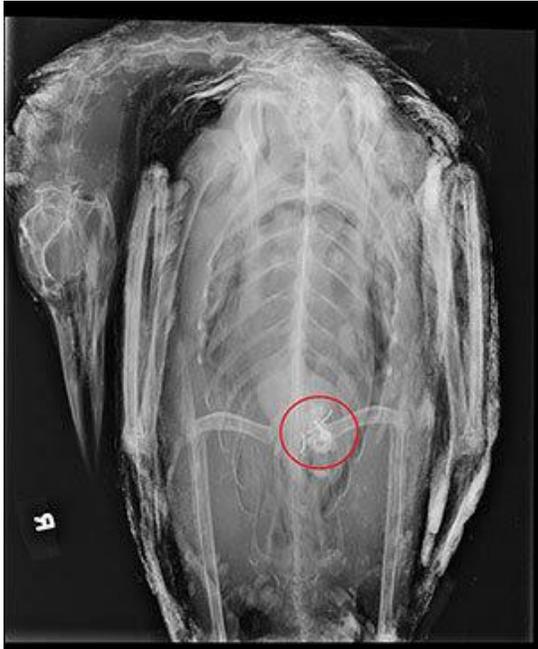
⁶ <https://www.pca.state.mn.us/living-green/nontoxic-tackle-get-lead-out>

⁷ <https://www.mprnews.org/story/2019/10/28/minnesota-moves-to-shut-water-gremlin-over-lead-health-threat>

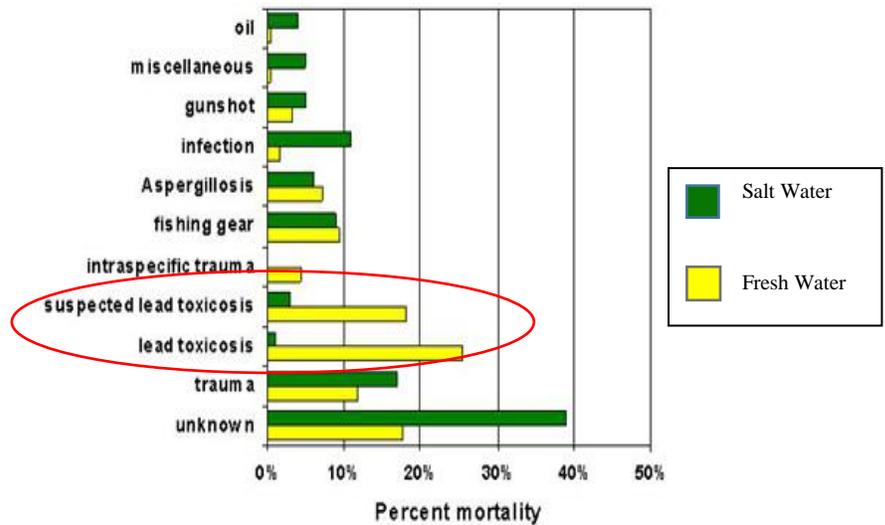
⁸ <https://www.dnr.state.mn.us/eco/nongame/projects/leadout.html> (“Gremlin Green” sinkers described).

Minnesota Center for Environmental Advocacy

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Causes of mortality in adult loon



Data source: <https://vet.tufts.edu/wildlife-medicine-program/research-2/loon-health-and-mortality/>

Image source: <https://vtecostudies.org/blog/first-documented-lead-poisoned-loon-collected-on-lake-winnepesaukee/>

“A new study published in the Journal of Wildlife Management and Wildlife Monographs reveals the devastating effects of lead fishing tackle on loon populations. **Poisoning from lead fishing tackle has been identified as the leading cause of mortality in adult common loons**, but the population-level effects of mortality from ingested lead tackle on loons have not previously been determined. When investigators examined a long-term dataset (1989-2012) on common loon mortality in New Hampshire, 49% of adult loon deaths resulted from lead toxicities from ingested fishing tackle. Jigs accounted for 53% and sinkers for 39% of lead tackle objects removed from loons. Loons appeared to obtain the majority of lead tackle from current fishing activity rather than from a reservoir of lead tackle on lake bottoms. **The researchers estimated that lead tackle mortality reduced the population growth rate by 1.4% and the statewide population by 43% during the years of the study.**”

Tiffany J. Grade, Mark A. Pokras, Eric M. Laflamme, Harry S. Vogel. Population-level effects of lead fishing tackle on common loons. *The Journal of Wildlife Management*, 2017; DOI: 10.1002/jwmg.21348

Wily. “Lead fishing tackle may be threatening loon populations.” *ScienceDaily* 12 October 2017. sciencedaily.com/releases/2017/10/171012163926.htm

Last updated: 2/19/21



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Contact: Kara Josephson, Legislative Director
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MINNESOTA IS NOT LEADING ON **LEAD**



States That Have Banned Lead Sinkers

Six states within the Common Loon breeding range restrict lead fishing tackle.

New Hampshire

- NH Rev. Stat. §339:77 - Lead Fishing Sinkers and Jigs; Sale Prohibited.
- NH Rev. Stat. §211:13-b – Lead Fishing Sinkers and Jigs; Use Prohibited
- The sale and use of any lead sinkers and jigs are prohibited in New Hampshire. A violation carries a penalty not exceeding \$250.
- Lead jigs and sinkers account for 48% of mortalities among adult loons, which is the largest single cause of adult Common Loon mortalities in New Hampshire.

New York

- NY Env. Cons. L. §11-0308
- The sale of lead fishing sinkers weighing one-half ounce or less is prohibited in New York.
- In 2004, New York listed the Common Loon as a Species of Special Concern. It banned the sale of small fishing sinkers because ingesting lead fishing tackle is one of the leading causes of death for adult Common Loon and other wildlife in New York.

Maine

- Maine LD 730 – An Act to Protect Maine’s Loons by Banning Lead Sinkers and Jigs
- The sale and use of lead sinkers smaller than 2.5 inches and/or less than 1 ounce are prohibited in Maine.
- The adult Common Loon population in Maine is small. Maine concluded that keeping lead sinkers out of Maine waters would increase the survival rate of these birds and allow for population growth of the species.

Massachusetts

- 321 CMR 4.01: Taking of Certain Fish
- Lead sinkers, weights, and jigs weighing less than 1 ounce are banned in Massachusetts.
- The regulation was implemented primarily to protect Massachusetts’ small population of Common Loon.

Vermont

- 10 V.S.A. §4615: Lead sinkers; sales prohibited
- In 1978, Vermont placed the Common Loon on the state’s Endangered Species List. Vermont enforced this law to prevent the Common Loon and other birds from becoming endangered in the future.

Washington

- WAC 232-28-619 Washington food fish and game fish – Freshwater exception to statewide rules.
- Washington enforces a ban on the use of lead weights and jigs that measure 1.5 inches or less when fishing on certain lakes in the state.

And one that has not...Minnesota

Minnesota has **NOT** banned lead fishing tackle **to protect the Common Loon and other wildlife species from lead toxicity.**



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February 22, 2021

Mr. Peter Strohmeier
Committee Administrator
Minnesota House of Representatives
Environment and Natural Resources Finance and Policy Committee

Dear Mr. Strohmeier:

I wish to add my voice to those expressing support of *HF 157 (Fischer) Lead tackle sale, manufacture, and use prohibited*. As a scientist who has studied aquatic environments for 49 years, I am well aware of the documented and potential adverse effects that lead can have on fish and wildlife. Lead is extremely toxic to all vertebrate animals, terrestrial and aquatic. The published scientific evidence supporting this statement is voluminous and incontrovertible. Published studies of invertebrate animals, including some species that live in Minnesota aquatic systems, reveal mechanisms of toxicity and levels of mortality that parallel those of vertebrate animals. No level of lead exposure has been demonstrated to be safe to animals.

To my knowledge, no one has estimated how much lead is added to the waters of Minnesota each year by anglers. However, a study by Paul Radomski and his colleagues, who estimated fishing tackle losses in just five Minnesota lakes, suggests that the amount might be tens to hundreds of tons. Science tells us that adding a few ounces could be detrimental if ingested by a Common Loon. Environmental ethics tells us we should not add even a crumb of lead to our waters if we can reasonably manage that. Add to those two notions the reality that our youngest anglers are being exposed to lead every time they handle jigs and sinkers, and the need for moving this bill forward becomes clear.

Personally, I would like see an outright ban on all lead in fishing tackle, but I find this bill offers a reasonable and responsible start. Non-lead alternatives to the sizes of jigs and sinkers that will be prohibited are currently available. This bill gives anglers, retailers, and manufacturers plenty of time to adjust and, hopefully, a chance to realize that eliminating lead tackle entirely in the future is possible and necessary as a socially responsible citizenry. I commend Representative Peter Fischer and Representative Sydney Jordan for writing and introducing this bill.

Sincerely,



Jay T. Hatch
Associate Professor
H.T. Morse-Alumni Distinguished Teacher Professor
Academy of Distinguished Teachers
James Ford Bell Museum of Natural History, Research Associate

Dear Mr. Strohmeier,

I am writing as a private citizen and resident of the state of Minnesota **in support of** the proposed legislation to restrict the sale and use of lead in fishing jigs and sinkers less than 1 ounce in size by 2024 and 2025, respectively.

As someone with an environmental science and fisheries education and working experience, I believe this bill would improve environmental health and public safety by aiding Minnesota in the shift to using nontoxic fishing tackle, while recognizing that such a shift may pose temporary challenges to the tackle production industry for the next several years, and will require support and creativity from many groups working together to be successful.

Since we know that lead is toxic even in very small amounts, and since the body of scientific evidence overwhelmingly shows the dangers of lead toxicity in vertebrate biology, and the fact that high amounts of lead fishing tackle are lost into our lakes each year, I believe it is time to enact this legislation. Programs have been in place for years to educate the public and promote nontoxic tackle, but it hasn't been quite enough to stop almost everyone from buying and using lead fishing tackle. Legislation would really help move things along the gradient toward nontoxic tackle options for sale and use, and for statewide behavior changes toward using nontoxic tackle.

- As a parent I am quite concerned about keeping my own kids, and young anglers everywhere, away from any possible lead exposure while fishing. There are so many lead-alternative fishing tackle options available now, with more choices coming all the time, that everyone should be able to get their hands on nontoxic options. If reasonable legislation is passed to restrict the sale and use of certain sizes and types of lead fishing tackle, and if collaboration can be achieved between producers, users, environmental scientists, and legislators, then this would be a huge step forward toward protecting our environment in Minnesota.

- As an environmental scientist, I know that a remarkable number of birds and other fish and wildlife are known to die from lead poisoning every year, and I believe that banning a certain size of lead tackle is a reasonable option to take in response.

- As an advocate for environmental justice, I see a big problem with expensive nontoxic options being financially available for the rich-to-middle-class folks, while poorer folks are left with only the cheap, lead, toxic options; when lead is restricted, and nontoxic options are widely available with more market competition, lower prices, and what I hope will be widely-available fishing starter kit giveaway programs for new anglers, then low income folks will have a better chance of being protected from lead toxicity as well.

- Finally, as a Minnesotan, knowing that only a handful of other states have enacted such legislative restrictions on lead tackle, I would feel great pride to be one of the leaders in an environmental movement such as this. It's past time to do the right thing and enact these restrictions.

I would encourage everyone involved here to look for collaborations and build bridges between public agencies, manufacturers, professional societies, educators, and anglers to ensure that this leads to effective and positive change, not just another fight. It's long past time for this change.

Thank you for your consideration.
-Jessica Koehle
Resident of Apple Valley, Minnesota
jessiekoehle@gmail.com

February 22, 2021

RE: Support for HF157 (Fischer): Lead tackle sale, manufacture and use prohibition

Representative Rick Hansen
Environment and Natural Resources Finance and Policy, Minnesota Legislature

Dear Representative Hansen and committee:

I write to express my strong support of HF157 to ban the use of lead from Minnesota's waters. Lead entering lakes, rivers and wetlands is toxic to animals. Waterfowl such as loons and swans are especially affected by lead, resulting in well documented negative population effects. A single lead sinker can kill a loon. It is estimated that 100 to 200 loons die per year from lead fishing tackle in Minnesota. These are needless deaths.

Thank you for attention to this critical matter.

Sincerely,
Paul J. Radomski
5504 Hay Creek Rd
Fort Ripley, MN 56449



NATIONAL
LOON CENTER

Dear Minnesota House of Representatives,

We appreciate the opportunity to comment about H. F. 157, which would phase out the manufacture, sale and use of certain lead fishing tackle within a sensible timeframe.

Widely distributed scientific research shows that lead fishing sinkers and jigs are toxic to common loons when ingested. Mortality studies on loons indicate that lead poisoning is among the top three causes of loon mortality. Similarly, dire effects have been found in mortality studies of trumpeter swans and bald eagles.

Toxic lead tackle frequently endures in freshwater systems for decades at the bottom of a lake, and its effect as a toxin remains – a hazard that grows cumulatively over time as more tackle is lost to the lake.

The good news is that nonlead tackle alternatives are available, enabling Minnesotans to pursue the treasured pastime of angling, while lessening our impacts to cherished species such as the beloved loon. Phasing out potentially harmful lead tackle demonstrates our commitment to furthering our shared angling legacy while also doing so responsibly as Minnesotans who love the outdoors and wildlife.

Many states have already passed legislation to address this concern, including Washington, New Hampshire, New York, Maine, Massachusetts and Vermont. Minnesota proudly estimates that it contains 12,000 loons, well more than any other state in the “lower 48.”

The National Loon Center supports and embraces Minnesota’s legacy of angling on our more than 11,000 lakes. In this case, we can fish responsibly with simple alternatives that do not diminish the sport, while reducing mortalities to the most iconic bird of our great state. It is our opportunity to be a leader in efforts to conserve the loon.

We encourage you strongly to support H.F. 157, and enhance our angling tradition in a loon-friendly manner.

Sincerely,

Jon Mobeck
Executive Director
National Loon Center
Crosslake, Minnesota
www.nationallooncenter.org



February 22, 2021

Representative Rick Hansen, Chair
House Environment and Natural Resources Finance and Policy Committee
Via e-mail only: Peter.Strohmeier@house.mn

Re: **Support of HF 157 – A Bill to Phase Out Lead Fishing Tackle**

Dear Chair Hansen and Committee Members:

We respectfully request your vote in favor of HF 157 – a bill to phase out lead fishing tackle.

The science is clear. There is no safe level of exposure to lead; it is toxic to humans and animals. Lead is particularly harmful due to its ability to persist and bioaccumulate in the body.

Lead jigs and sinkers are a cumulative problem, with on-going additions each year to our lake and river bottoms. Their toxic qualities are retained for a long period of time, continuing to poison iconic wildlife like common loons and trumpeter swans, as well as ducks and geese. When poisoned, these birds become food for raptors like bald eagles – who are also poisoned in this toxic food chain created by lead fishing tackle.

We quote the following from the Minnesota Pollution Control Agency:

“Lead is a toxic metal that, in sufficient quantities, has adverse effects on the nervous and reproductive systems of mammals and birds. Found in most fishing jigs and sinkers, this metal is poisoning wildlife such as loons, and eagles. But there is hope.

There are alternatives to traditional lead tackle. Anglers can now use sinkers and jigs made from non-poisonous materials such as tin, bismuth, steel, and tungsten-nickel alloy — and they can find them at established sporting goods retailers and on the Internet.” <https://www.pca.state.mn.us/living-green/background> [Last visited 2/18/21.]

We also note the manufacture of lead fishing sinkers and other lead products has **environmental justice consequences**. The Office of the Legislative Auditor's Report, "Minnesota Pollution Control Agency Regulation and Oversight of Water Gremlin" (February, 2021) states in part:

"In 2017 and 2018, Ramsey County Public Health received a series of reports of elevated levels of lead in the blood of children. Upon investigation, the county determined that these were children of Water Gremlin employees. Testing and analysis indicated ... that 'take home' lead dust from Water Gremlin was the source." [Report, pp. 10-11.]

The Report [page 13] also cited the court decision in Leppink v. Water Gremlin Co., A19-1975 (Minn. Ct. App. Jun. 1, 2020), in which Water Gremlin appealed the requirements for residential testing and clean-up. The Report cited the Court of Appeals' statement:

"In sum, the record supports the district court's determination that Water Gremlin's failure to take steps to prevent **the migration of lead from its manufacturing plant to the homes of past and present employees is a public health nuisance.**"

Finally, we recognize and support the Minnesota Constitution, Article XIII, Section 12, which states: "Hunting and fishing and the taking of game and fish are a valued part of our heritage that shall be **forever preserved** for the people and **shall be managed by law and regulation for the public good.**"

Laws requiring non-toxic fishing tackle do not deprive a person of their constitutional right to hunt and fish. To the contrary, it is "for the public good" to regulate toxic substances on the end of a fishing line.

Please act to protect people, wildlife and water from lead poisoning and support HF 157.

On behalf of the undersigned organizations, and their thousands of Minnesota members, we **thank you** in advance for your attention to protecting the quality of our shared environment and the current and future generations who depend on it.

Sincerely,



Steve Morse
Executive Director