Lead in the Environment is a Significant Threat to Trumpeter Swans and Other Wildlife

Approved by TTSS Board of Directors

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To help reduce swan mortality, The Trumpeter Swan Society supports the elimination of all sources of lead deposition in the pursuit of hunting, fishing, and other outdoor activities.

The Trumpeter Swan Society (TTSS) is a private, non-profit international organization dedicated to assuring the vitality and welfare of wild Trumpeter Swan populations throughout North America. For over 50 years TTSS has been deeply involved in efforts to restore Trumpeter Swans as the species had been reduced to near extinction, eliminated from over 99% of their historic range by the 1930s. While we remain committed to Trumpeter Swan restoration we are also vitally concerned about the quality and quantity of habitat available for these majestic birds.

Lead poisoning is a significant health and mortality issue for Trumpeter Swans across North America. Trumpeter Swans often feed in wetlands, rivers, lakes, and fields where hunting and fishing have occurred for decades. Despite the long-standing prohibition of lead shot for waterfowl hunting in the United States (1991) and Canada (1997), many places where hunting occurred still harbor significant concentrations of spent lead shot.

Lead is a persistent, bio-accumulative toxic element that persists in the environment indefinitely unless it is mechanically removed or buried by sediment. Hundreds of Trumpeter Swan deaths resulting from lead ingestion are documented every year in North America, often decades after hunting with lead ammunition has ceased. Certain lead fishing tackle (split-shot, bell, and other small sinkers, lead jig heads) also pose ingestion hazards to swans in shallow lakes and rivers and have caused documented cases of lead poisoning.

In addition to aquatic habitats, Trumpeter Swans feed on waste grain and other crops such as potatoes in agricultural fields. They also utilize wildlife crop fields on refuges, or pastures where they risk ingestion of lead shot, or even bullet fragments, from surface soils. Upland feeding by

swans has been widespread in the Pacific Flyway for decades and appears to be expanding in other places where wintering swan numbers are growing. Lead ammunition has not been banned for hunting upland game in most jurisdictions.

Shot pellets on both upland and aquatic areas, as well as fishing tackle, are inadvertently ingested by swans during foraging for tubers or picking up sand and grit, which is necessary for digesting coarse food items. Ingested lead is broken down mechanically in avian gizzards and is highly toxic. The toxicity in even one lead sinker, or three lead pellets can slowly kill an adult Trumpeter Swan over a few weeks as paralysis, emaciation, and other changes to body systems occur when lead enters the blood stream and cause organ failure.

The tragedy of lead can be compounded further when scavengers like bald eagles feed upon the carcasses of waterfowl or other animals carrying lead, and then develop secondary lead poisoning themselves.

Presently, non-toxic ammunition is required for hunting waterfowl, coots, rails, and snipe throughout the United States, and for hunting ALL migratory birds in Canada except woodcock, pigeons, and doves. A few State, Provincial, or Federal lands have additional non-toxic requirements for upland-bird or big-game hunting. One example is California that in 2019 banned lead ammunition statewide for taking any wildlife. Several other states have prohibitions for certain wildlife management areas or for taking certain species, but regulations are few and highly variable. Upland gamebird hunting in proximity to wetlands obviously poses a risk of lead deposition in those wetlands. Avoiding use of lead shot in agricultural fields or grasslands where migrating and wintering birds feed is also desirable. Non-toxic shot is readily available in a variety to sizes suitable for upland gamebird hunting and, we believe, should be required in most places.

Lead bullets used for big-game hunting pose a lower risk to swans simply because they are deposited in smaller numbers and are rarely intentionally discharged over places where swans feed. However, here too, non-toxic alternatives are readily available and have the decided benefit of reducing the risk of lead poisoning to any animal – humans as well as avian and

mammalian scavengers – consuming the flesh or entrails of harvested animals. Small-caliber lead bullets are still widely used to take non-game animals (e.g., ground squirrels, prairie dogs, skunks) and also have been implicated in poisoning scavengers. Although the direct risk to Swans of ingesting lead bullets or fragments is lower than with shotgun pellets, TTSS supports the adoption of non-toxic bullets for hunting any animal.

As noted above, certain lead fishing tackle also pose ingestion hazards to swans in shallow lakes and rivers Non-toxic sinkers and jigs for fishing are becoming more available. Some states (e.g., Minnesota) have established tackle exchange programs to assist in "getting the lead out". TTSS strongly endorses efforts to reduce the deposition of lead fishing tackle in lakes used by Trumpeter Swans, Common Loons, and other wildlife vulnerable to lead poisoning.

The membership of TTSS is diverse. Our Board of Directors and members include avid hunters and anglers. We recognize that a shift to non-toxic ammunition and fishing tackle carries a cost and will take time. But critically, lead is a toxic metal that is unsafe when ingested by wildlife and humans alike. Lead ammunition and tackle needlessly expose Trumpeter Swans and other animals to illness or death. Lead has already been removed from paint, gasoline, pipes, and a host of other items to protect human health and the environment. Despite its known toxicity, lead-based ammunition and fishing tackle remain a source of unregulated lead deposition in our lands and waters. Remediation of contaminated areas is nearly impossible. The easiest thing we CAN do is stop adding more lead to the environment.

For more information, including references to key scientific studies supporting the elimination of lead in the environment we urge you to consult the following sources and the studies they cite:

Canadian Veterinary Medical Association:
https://www.canadianveterinarians.net/documents/use-of-lead-fishing-tackle-and-lead-shot-in-canada

A consensus statement about the risks of lead ammunition in the environment from 30 involved scientists, with an extensive list of peer-reviewed citations:
https://www.biologicaldiversity.org/campaigns/get_the_lead_out/pdfs/Scientists_Heatlh_Impacts letter_3-13.pdf

Lead poisoning from ingestion of fishing gear: A review: Tiffany Grade and 11 other authors.

Ambio. 2019 Sep; 48(9): 1023–1038.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6675807/

The American Bird Conservancy and The Center for Biological Diversity: https://abcbirds.org/article/national-ban-on-lead-based-ammunition-fishing-tackle-sought-to-end-wildlife-poisoning-lead-still-a-potent-killer-of-millions-of-wild-birds-health-risk-for-humans/

Environment and Climate Change Canada: https://www.canada.ca/en/environment-climate-change/services/management-toxic-substances/list-canadian-environmental-protection-act/lead/using-more-lead-free-ammunition/lead-ammunition-executive-summary.html

Minnesota Pollution Control Agency: https://www.pca.state.mn.us/living-green/lead-free-fishing-tackle-get-lead-out