

## Why Alternatives?

Non-toxic alternatives have been approved and currently are available in North America and elsewhere. Approved nontoxic ammunition can be used for the successful hunting of game

Various brands can be used safely in all gauges of shotguns and nontoxic rifle bullets have been developed for hunting large game species. However, the widespread availability of this shotgun and rifle ammunition depends on assured markets provided by extensive regulation and enforcement. Steel ammunition can be used in all clay target sports and already is required by some shooting facilities.

There is an easy win-win solution. Hunters can use solid copper deer slugs and bullets. Many deer hunters have already switched and are very satisfied with the performance of copper.



Explore, enjoy and protect  
the planet

## Protect Iowa's Bald Eagles



### Sierra Club Iowa Chapter

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**Sierra Club  
Iowa Chapter**

**Protect our American Heritage  
Use Alternative Ammunition**

**E**agles are dying from lead poisoning, the result of eating deer carcasses shot with lead ammunition. Deer hunters can protect bald eagles from lead poisoning by switching their ammunition to non-lead ammunition.

According to The Wildlife Society, lead in ammunition and fishing tackle dates back hundreds and thousands of years respectively. Realization



of the hazards of lead ammunition to waterfowl and upland game birds such as pheasants can be traced to the late 1870s.<sup>1</sup>

As early as 1874, large waterfowl die-offs were reported from lead poisoning. In 1878, it was discovered that lead ammunition ingestion caused mortality in pheasants. In the 1940s, waterfowl die-offs were continuing and up to 16,000 ducks died at one site. As early as the 1980s, bald eagles had been found poisoned by lead ammunition in Minnesota. There are 500 scientific articles on the impacts of lead ammunition and over 130 species worldwide have been poisoned by lead ammunition.

The U. S. Fish and Wildlife Service banned lead ammunition for hunting waterfowl in 1991. However, lead ammunition continued to be used in hunting other species. By 2008, 24 states had instituted restrictions on the use of lead ammunition to minimize effects to upland game birds and eagles, and other species. Iowa is not one of those

states. However, Iowa does restrict lead shot on state areas near wetlands and several counties restrict lead shot at publicly owned areas.

Iowa has one of the largest wintering populations of bald eagles in the lower 48 states, with thousands wintering here. In recent years, bald eagle poisoning has become an increasing problem. Iowa also has a very large deer population. According to the Iowa Department of Natural Resources (DNR), the reported kill for the 2007-2008 hunting season was 146,214 deer.<sup>2</sup> The thousands of eagles that winter in Iowa take advantage of the ample supply of deer carcasses available throughout the fall and winter.

Lead slugs are "soft" and when a slug hits bone in a deer, the slug shatters into small pieces. Eagles feeding on deer remains easily ingest the lead by accident. Wildlife rehabilitators across Iowa have been documenting an alarming number of bald eagles that are sick and dying from ingesting lead. Since January 2004, blood, liver, or bone samples were analyzed for lead levels from 105 of the 133 eagles in the database. More than 58 percent of all of the eagles admitted for rehabilitation had lead in their systems.<sup>3</sup>

If shot with a lead bullet or slug, poisonous fragments of lead are left in the deer and the gut piles. Glowing fragments in X-rays of deer and eagle stomachs show the lead fragments, which might be too small to see otherwise. A piece of lead weighing



<sup>1</sup>The Wildlife Society, "Lead in Ammunition and Fishing Tackle."

<sup>2</sup>Iowa Department of Natural Resources, "Trends in Iowa Wildlife Populations and Harvest 2007."

<sup>3</sup>Kay Neumann, B.A., M.S., "Lead Poisoning in Iowa Wintering Bald Eagles."

200 milligrams (the size of a #4 piece of shot or the size of a baby aspirin) is enough to kill an eagle.

Heavily hunted areas can accumulate lead. Surface water, vegetation and soil can be contaminated. Metallic lead can remain relatively stable and intact for decades or centuries. However, under certain environmental conditions, lead can be released and taken up by plants or animals, causing a range of biochemical, physiological and behavioral effects.

Lead poisoning related to spent ammunition and lost fishing sinkers has been extensively studied in avian species, and at least two studies indicate that the ban on the use of lead ammunition for hunting waterfowl and coots in North America has been successful in reducing lead exposure in waterfowl. Nonetheless, other species such as upland game birds and scavengers (e.g., vultures, eagles) have been documented to be exposed, and in some instances other populations may be at risk. Despite the ban on lead ammunition for waterfowl hunting, current data for raptor and avian scavenger species indicate increases in lead exposure in these species.

**Protect Iowa's bald eagles from lead poisoning.  
Please choose alternative ammunition.**



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