WRITTEN TESTIMONY via email

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Regarding lead - once it's shot, and it's in the soil, it'll be around for the next 2,000 years or so. Because it's an element, it doesn't degrade, it's not volatile, but it can disperse. Acid rain dissolves the shot and gets it moving (i.e. into plants, surface waters, groundwaters, etc.). The plants and water then become toxic as the lead is either dissolved in them (water), bioaccumulated in them (plants that animals will browse on) or settles and accumulates (silts, sediments and soils). It's also toxic to the plants themselves as well as to invertebrates. So whatever shot you disperse and leave is staying there for the next 20 - 30 generations, accumulating in the soil as well as dispersing through the groundwater.

As to the level of toxicity - if you use the same criteria that Superfund sites are cleaned up to, then a single shot from a 22 is going to contaminate about 18 bathtubs full of soil and about 50,000 gallons of water. A shotgun shell will contaminate about 10 times that much. So shot is pretty acutely toxic in the specific environment in which its shot (i.e. ingestion of a sinker or pellets will result in poisoning and death), and it's chronically toxic as it disperses through the environment.

Shooting ranges are especially contaminated. In Williston, a home's water supply has been contaminated by lead. The home is next to a firing range. Workers at firing ranges often suffer from lead poisoning. For children, the danger is real as revealed at a Vancouver Washington rifle club.

But for the junior team at the Vancouver (Wash.) Rifle and Pistol Club, the peril that emerged from their sport didn't come from a stray bullet.

It came from lead. In 2010, blood tests revealed that 20 youths had been overexposed to the poisonous metal after shooting in the club's dirty, poorly ventilated range.

"It was devastating," said Marc Ueltschi, the junior team coach and a club member. "It scared the life out of me. No one knew anything about lead poisoning and what to fix."

Vancouver Rifle is just one of several private gun clubs across the United States that have posed health hazards in a sport with growing numbers of youths and women.

While those most likely to be poisoned by lead in gun ranges are the workers themselves, The Seattle Times has found dozens of avid shooters overexposed in such states as Washington, Massachusetts and Alaska.