

GETTING THE LEAD OUT OF MASSACHUSETTS FISHING ONE SINKER AT A TIME

by Joy Onasch

What does 40 pounds look like? Well, it could be a 50-inch northern pike or enough standard ½ pound servings of fish for 80 hungry eaters. Michael Browne, a Boy Scout with the Boston Minuteman Council, St. Agatha Troop 5, Milton, MA, saw it a different way. He visualized it as 640 one-ounce lead sinkers that he could keep out of Massachusetts lakes, ponds, rivers and streams. If he could do that, he figured he could help protect the health — and probably save the lives — of numerous birds, mammals and perhaps other kinds of wildlife that could ingest those sinkers if they were lost or left behind by anglers.

Michael didn't just sit on his idea, he acted. He applied for and received a grant in 2007 from the Massachusetts Toxics Use Reduction Institute (TURI) at UMass Lowell to help get the lead out of our inland waterways. He attended fishing derbies, created educational materials, and exchanged non-lead sinkers for lead sinkers. Michael won a *Field & Stream* magazine Hero of Conservation award and earned his Eagle Scout rank with this project. In addition, by the time you read this he will have become the proud recipient of the President's Environmental Youth Award for EPA Region 1, bestowed on him in Washington this



Photo by Patricia Browne

This is what only 10 pounds of lead fishing weights look like (300 weights in a variety of sizes). Now imagine what 40 pounds would look like. That is the amount Michael Browne collected at his three fishing derbies in the spring of 2007.



Michael Browne and other members of Milton's St. Agatha Troop 5 stand in front of the tent and educational display of materials they set up for their lead exchange program at a fishing derby held at the Boston Minuteman Council's Camp Massasoit in Plymouth in May of 2007.

April. He will also be representing the U.S., competing for the Volvo Adventure Award with his project, at the United Nations Environmental Programme in Sweden in May.

Michael's project was one of six that were funded through TURI's community grant program last year. This year an additional 10 projects are being funded, bringing the total number of community grants awarded by TURI over the past 13 years to 87. The grant projects focus on a range of toxins — lead in fishing, chemicals in households, pesticides used indoors and outdoors, materials used in floor finishing, and solvents in auto shops — just to name a few.

Lead is a priority for TURI due to the hazard it poses to the health and wellbeing of wildlife, humans, and the environment.

How does lead affect health?

Long-term exposure to lead in humans affects the blood, central nervous system, blood pressure, kidneys, and Vitamin D metabolism. Infants and children are particularly sensitive to the health effects of lead; exposure can cause permanent cognitive deficits. Reproductive effects such as decreased sperm count and spontaneous abortions have also been associated with high lead exposure. The developing fetus is at particular risk from maternal lead exposure, with effects including low birth weight and slowed neurobehavioral development.

What about the wildlife?

According to the North American Fisheries Journal, on average, an angler loses one sinker for every 6 hours of fishing. These sinkers are then fair game for birds — especially waterfowl and loons — to

ingest as they scoop up gravel to help grind food in the crop or gizzard of the digestive system.

A study of 522 loons found dead in New England was conducted between 1987-2000. The study revealed that for breeding adult loons, confirmed and suspected lead poisoning from ingested fishing weights accounted for almost half of the adult deaths.

What can you do to help?

Are you interested in how you too can help make a difference in your community and environment by keeping lead sinkers out of the waterways? Here are eight ideas to get you started:

- 1) Replace all your lead sinkers with safer lead-free alternatives.
- 2) Ask your tackle shops or retailers to stock the alternatives if they don't already.
- 3) Dispose of your old sinkers properly at a household hazardous waste collection site or a local recycler.
- 4) Wash your hands after handling lead.
- 5) Pack it in, pack it out. Don't leave tackle or other waste around your fishing areas.
- 6) Spread the word. Tell other anglers about the problem with lead and encourage them to switch too.
- 7) Outfit kids' tackle boxes with non-lead sinkers. It is safer for them and instills a conservation ethic.
- 8) Organize a fishing sinker exchange in your community.

Regulations already exist

Did you know that several northeastern states have already banned or restricted the use of lead fishing gear? Consider the following:

- Massachusetts has banned the use of lead sinkers at the Quabbin and Wachusett reservoirs.



Photo by EAYFOTO

Michael Browne speaks at the Great Hall at TURI's 2007 State House event, describing his grant project and accomplishments.

- New Hampshire has banned the use of lead sinkers that weigh less than an ounce and lead jigs smaller than an inch.
- Vermont has banned the use **and** sale of lead sinkers weighing a half-ounce or less.
- Maine and New York have banned the sale of lead sinkers weighing a half-ounce or less.

What can you use instead of lead?

Feasible alternatives to lead are available. In June of 2006, TURI completed a study of alternatives to 5 chemicals, including lead in fishing tackle. The facing page shows a table summarizing the environmental and human health effects of the alternatives in comparison to lead. For the complete study, go to **www.turi.org/home/turi_publications**.

As far as price is concerned, purchasing these alternatives would only add \$5-\$10 to the annual budget of an avid angler.

With some simple steps, and not much of a financial investment, you too can make a difference to your community

and surrounding environment, just like Michael Browne did. If you are interested in applying for a grant through TURI, please read the grant information below. TURI would be pleased to see applications for community-based, state-wide sinker exchange programs or informational campaigns related to lead in fishing tackle.

Grant Information

- The TURI Community Program provides annual grants to non-profit community or environmental organizations, municipalities and their offices or departments, academic institutions including middle and high schools, and youth with an interest in community service. Applications are due in June and awarded in August.
- Grant recipients work to reduce the use of toxic chemicals, reduce the exposure of residents and workers to toxic chemicals, keep toxic chemicals out of our air and water, and improve the ways in which municipalities meet the needs of their citizens.
- TURI's next request for proposals will be out by the time you read this. Contact Joy Onasch at **joy@turi.org** or 978-934-4343 for more information or

<i>Alternative materials evaluated</i>	<i>Comparison relative to lead</i>	
	Environmental	Human Health
Bismuth	Not toxic to avian species.	Not a mutagen or carcinogen. Not a reproductive or developmental toxicant.
Ceramic	Unknown toxicity to waterfowl and aquatic species, though it is expected to be low.	May contain crystalline silica (a carcinogen when breathed). Not a reproductive or developmental toxicant.
Steel	Less toxic to waterfowl and aquatic species.	Not a mutagen or carcinogen. Not a reproductive or developmental toxicant.
Tin	Much less toxic to aquatic organisms.	
Tungsten	Low toxicity to aquatic organisms (crustaceans and algae).	

visit the web site and www.turi.org/community to download application materials.



Joy Onasch is the Community Program Manager at TURI. In addition to administering the annual community grants, she is currently working with the fishing community to reduce the use of lead, and with the dry cleaning sector to reduce the use of

solvents across Massachusetts. She is an engineer with over 10 years of experience with industry, government, and institutions, assisting them with environmental compliance issues and pollution prevention projects. Joy earned a Bachelor's degree in Mechanical Engineering and a Master's in Engineering and Policy. She is a registered Professional Engineer in three northeastern states and a Certified Toxics Use Reduction Planner in Massachusetts.



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