

# 10 Surprising Facts about Soft Plastic Fishing Lures, Health, and Water Quality

- 1) Fishing is the most popular form of outdoor recreation in the U.S.: 40 million anglers of all ages, including millions of children; more participants than golf and tennis combined. Based on the dollar value of retail sales of soft plastic fishing lures, there are approximately 100 million bags of these lures sold annually in the United States.
- 2) Soft plastic fishing lures typically are made from polyvinyl chloride (PVC) plastisol. This includes (a) PVC resin, (b) chemicals called "phthalates" that soften PVC and (c) stabilizers. Soft plastic fishing lures typically are 50%-80% phthalates. (U.S. Patent Nos. 7,266,922 (Oelerich), 5,408,780 (Chambers), 4,530,179 (Larew)). Phthalates leach out because they do not chemically bind to the PVC resin.
- 3) Some phthalates are considered reproductive toxins linked to a variety of health problems such as (a) abnormal development of the reproductive system in boys; (b) deteriorated sperm quality in men; and (c) premature puberty in girls. See Swann, et al., "Decrease in Anogenital Distance among Male Infants with Prenatal Phthalate Exposure," *Environmental Health Perspectives*, August 2005, Vol. 113, No. 8; Hoppin, "Male Reproductive Effects of Phthalates: An Emerging Picture," *Epidemiology*, May 2003, Vol. 14, No. 3. The U.S. Centers for Disease Control says phthalates mimic estrogen and "get rid of things that are in the testosterone line, the things that make a man a man." *USA Today*, August 2, 2005.
- 4) Exposure to phthalates causes liver damage and other problems in freshwater fish. Ghorpade, N., et al., "Toxicity Study of Diethyl Phthalate on Freshwater Fish *Cirrhina Mrigala*," *Ecotoxicology and Environmental Safety*, 2002, Vol. 53, No. 2, pp. 255-258.
- 5) The Consumer Product Safety Improvement Act of 2008 (August 2008) bans phthalates above trace amounts in children's toys. The definition of "children's toy" is broad enough to potentially include soft plastic fishing lures. Soft plastic fishing lures typically contain phthalates in concentration of 500 to 800 times the legal limit for children's toys.
- 6) Soft plastic fishing lures are the only PVC products that by design are thrown directly into and lost in our water resources. At an average of 3 to 4 ounces per bag, there are 20 million pounds of PVC fishing lures thrown into surface waters every year.
- 7) Most lures are lost or discarded in or around the water. Ingestion by fish and other wildlife leads to malnourishment or death. See Dr. Russell Danner (Maine Department of Inland Fisheries & Wildlife), et al., 2007, "Effects of Plastic Fishing Lures on Brook Trout Growth," available at [http://www.fslures.com/document\\_uploads/37\\_Maine\\_Study](http://www.fslures.com/document_uploads/37_Maine_Study) (copy available upon request).
- 8) Based on ingredient usage rates, upwards of 10 million pounds of phthalates are deposited into the environment annually due to soft plastic fishing lures. This amounts to over 1.2 million gallons of phthalates – enough to fill 160 tanker trucks – every year.
- 9) The U.S. Geological Survey found phthalates to be the most prominent contaminant in ground and surface waters. Stile, et al., "Measurement of Drinking Water Contaminants by Solid Phase Microextraction Initially Quantified in Source Water Samples by the USGS," *Environmental Science & Technology*, 2008, Vol. 42, No. 8, pp. 2976-2981.
- 10) Competitively-priced alternatives to soft plastic fishing lures are readily available, including some made entirely of edible, FDA-approved animal feed ingredients.