

Table 3.4.3 J: Fishing Sinkers – Tin

Financial Parameter	Measure/Metric	Source of Information
<i>Required Data</i>		
Initial purchase price for chemical/alternative	<p>Tin raw material price: The Platts Metals Week average composite price for tin in December 2005 was \$4.43/lb, which was 7% higher than the November price and 20% less than the December 2004 price.</p> <p>Lead raw material price: \$0.65/lb, Platts Metals Week North American producer price, December 2005.</p> <p>A major U.S. fishing sinker manufacturer, Water Gremlin, said that its cost to purchase lead was \$0.30 per pound in 2003. Its cost for tin was \$3.00/lb.</p>	<p>Carlin, 2006b</p> <p>Gabby, 2006a</p> <p>Myers, 2003</p>
Initial purchase cost for end-product/component	<p>Removable Split Shot Sinkers: Prices range from \$0.02 for a BB size sinker to \$0.19 for a #1 size sinker. Prices are approximately 1.5 to 4 times the price of lead removable split shot sinkers.</p> <p>Note: The tin sinkers were typically sold in packages with smaller quantities of sinkers than the equivalent lead sinkers, which may affect a per unit price comparison.</p>	<p>Bass Pro, 2006</p> <p>Cabela's, 2006</p> <p>Wal-Mart retail store, Bellingham, MA, March 2006.</p>
Availability of chemical/alternative	<p>Tin has not been mined in the United States since 1993. World tin reserves appear to be adequate to meet foreseeable demand.</p> <p>Domestic demand for primary tin is expected to grow slowly in the next few years, at a rate of about 1% per year. That rate, however, could double in a few years if new applications - especially those in which tin is substituted for toxic materials, such as lead-free solders - find acceptance in the marketplace.</p> <p>Recycling: About 9,000 tons of tin from old and new scrap was recycled in 2005. Of this, about 5,000 tons was recovered from old scrap at 2 detinning plants and 91 secondary nonferrous metal processing plants.</p> <p>Import Sources (2001-04): Peru, 44%; China, 14%; Bolivia, 14%; Indonesia, 11%; and other, 17%.</p>	<p>Carlin, 2006b</p>
Availability of component/end-product	<p>Tin split shot sinkers were available at two major online retailers (Cabela's & Bass Pro) and at Wal-Mart stores. Other types of tin fishing sinkers were not available at these major retailers. However, one company, Warrior Sporting Goods, offers a line of tin sinkers including egg, cannon ball, walking, and split shot sinkers.</p>	<p>Bass Pro, 2006</p> <p>Cabela's, 2006</p> <p>FishUSA, 2006</p> <p>Wal-Mart retail store, Bellingham, MA, March 2006.</p> <p>Warrior, 2006</p>

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Capital costs	<p>Tin sinkers can be produced using the molding process that is typically used to produce lead sinkers although the different molds may be required. The manufacture of tin split-shot may require greater precision than the manufacture of lead split-shot in order to prevent damage to the fishing line from the hard edges on tin sinkers. The lower melting point of tin may result in lower energy costs than those for equivalent lead sinker production. Tin sinkers can be manufactured by individuals at home using lead sinker molds (USEPA, 1994)</p> <p>According to a manufacturer of tin weights, Warrior Sporting Goods, tin weights can be manufactured using the same molds used to manufacture lead weights (Myers, 2003).</p>	USEPA, 1994 Myers, 2003