

Table 3.4.1 G: Ammunition for Shooting Ranges – Tungsten

Financial Parameter	Measure/Metric	Source of Information
<i>Required Data</i>		
Initial purchase price for chemical/alternative	<p>In 2005, tungsten prices fluctuated from approximately \$2.72 per pound in January to approximately \$9.98 per pound in May.</p> <p>Lead raw material price: \$0.65 per pound, Platts Metals Week North American producer price, December 2005</p>	<p>DesLauriers, 2005</p> <p>Gabby, 2006a</p>
Initial purchase cost for end-product/component	<p>A study conducted by the New Jersey Division of Criminal Justice stated that the cost for Winchester’s Ranger Frangible ammunition, which had a projectile made of tungsten/copper/nylon, was \$428 per 1000 rounds or \$.43 per round. This is two to three times the price of Winchester’s USA training ammunition with a lead projectile and full metal jacket when purchased from online ammunition retailers. Winchester discontinued this tungsten product four years ago.</p>	<p>Zamrok, 2004</p>
Availability of chemical/alternative	<p>U.S. consumption of tungsten in 2005 was 11,600 metric tons. In 2005, inadequate supplies of tungsten concentrates within China combined with increased demand for tungsten materials in China and elsewhere resulted in steep increases in the prices of tungsten concentrates.</p>	<p>Gabby, 2006a</p>
Capital costs	<p>The process used to manufacture tungsten bullets is different than the lead bullet manufacturing process and therefore a switch from lead to tungsten bullets would require significant capital investment.</p>	