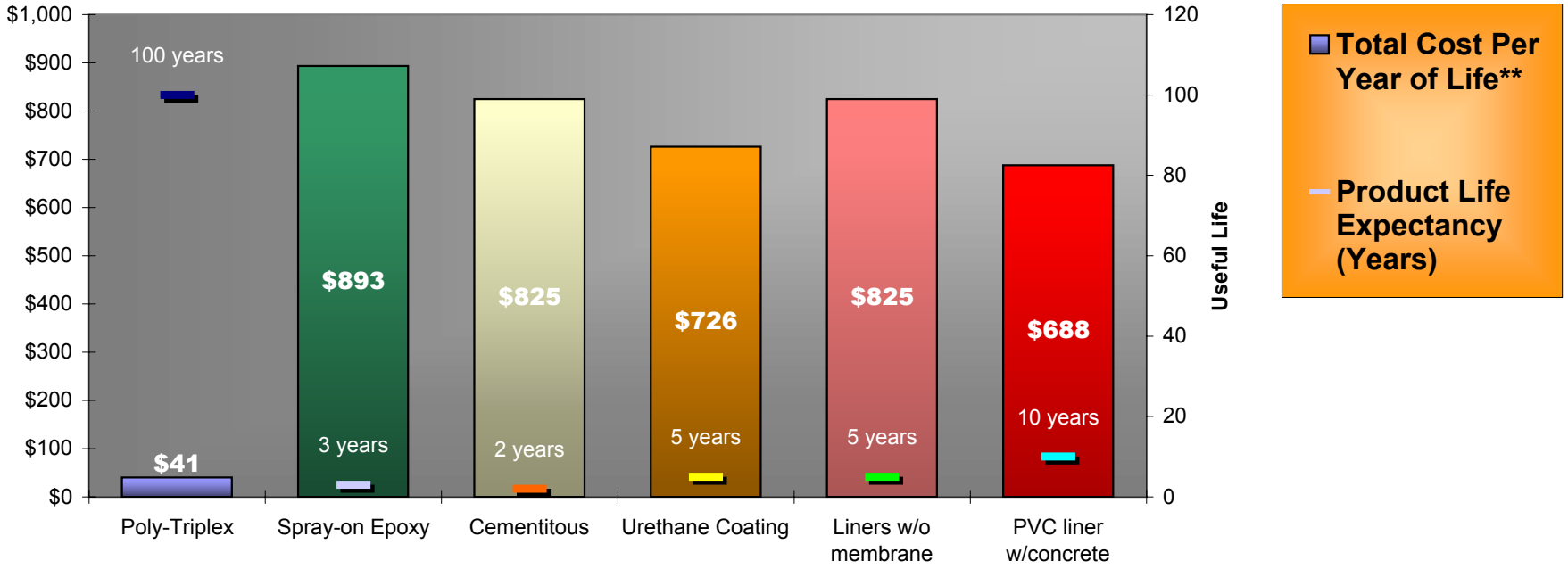
Cost Per Year of Life



VALUE ENGINEERING ANALYSIS - COSTS PER YEAR OF LIFE

This analysis is based on a typical sewer manhole of average depth with infiltration and deterioration problems. Some of these rehab methods are not suitable for horizontal lining of concrete and corrugated metal culvert pipe. Poly-Triplex Liners are suitable for both horizontal and vertical structures in sewer and stormwater collection systems.

	Poly-Triplex	Spray-on Epoxy	Cementitous	Urethane Coating	Liners w/o membrane	PVC liner w/concrete
Product Life Expectancy (Years)	100	3	2	5	5	10
10-Year Non-prorated, Materials and Labor Warranty to Stop Infiltration and Deterioration?	Yes	No	No	No	No	No
Effective in Freeze/Thaw Conditions?	Yes	No	No	Yes	Yes	Yes
Chemical Resistance	Excellent	Good	Fair	Good	Good	Good
Structural Enhancement	Excellent	Poor	Good	Good	Fair	Excellent
Ability to pass Vacuum test	Excellent	Poor	Poor	Poor	Fair	Good
Total Cost Per Year of Life**	**$41**	**$893**	**$825**	**$726**	**$825**	**$688**
**Calculated by adding material and labor costs						
Total Cost over 100 year period*	**$4,050**	**$89,333**	**$82,500**	**$72,600**	**$82,500**	**$68,750**

**Figures based on estimate of reinstallation costs over a 100-year period using average life expectancy and cost according to 2003 pricing*