

	First Cost	Capacity cu ft/sec	Probability of Overtopping in Any One Year
A. Single culvert 10 × 4 ft	\$162,000	300	0.20
B. Double culvert 8 × 4 ft	\$210,000	400	0.10
C. Double culvert 10 × 4 ft	\$250,000	500	0.04
D. Triple culvert 8 × 4 ft	\$310,000	600	0.02

Which design gives the lowest sum of the annual cost of capital recovery of the investment and the expected value of the annual damage from overtopping? Assume an i^* of 10%. Assume culverts will have lives of 50 years with zero salvage value.