

53:171 Water Resources Engineering
Lesson 14: Incorporating Risk in Economic Analysis

Problem

Assume that damages are an increasing function of flood risk. Estimate the average annual damages for the existing spillway for the flow-probability and flow-damages curves given below.

Peak Flow (cfs)	p	Expected Damage
1700	0.05	\$0
2000	0.02	\$200,000
2300	0.01	\$320,000
2700	0.005	\$400,000
3000	0.002	\$460,000
3300	0.001	\$500,000
3600	0.0005	\$540,000