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Squeaky Clean Car Wash Equipment Simulation Analysis

The following results from the car wash simulation demonstrate the drastic improvements to customer throughput possible with improved equipment. With the current equipment, customers are estimated to be waiting an average of almost 16 minutes. This results in an average of 92 cars per day waiting for at least 10 minutes for a single wash, and this number peaks at 154 waiting cars simulated on Sunday. In contrast, upgrading equipment to only take 3 minutes per wash results in a projected average of less than 3 minutes waiting, and an average of under 4 cars per day waiting at least 10 minutes. The results clearly show that investing in a faster bay causes customers to be served significantly (about 6 times) faster and reduces the number of customers waiting obnoxiously long times (by about 30 times).

Day	4 Minute Bay (Base)		3 Minute Bay (Upgraded)	
	Average Wait (min)	Cars With Long (10+ min) Waits	Average Wait (min)	Cars With Long (10+ min) Waits
Sunday	27.44	154	3.82	9
Monday	11.84	65	2.59	2
Tuesday	14.86	94	2.01	0
Wednesday	11.71	81	3.07	1
Thursday	26.96	146	1.87	0
Friday	6.24	38	2.79	0
Saturday	12.49	66	2.99	11
Average	15.93	92	2.73	3.29