

Pre-failure flow	Pre-failure flooded area (m <sup>2</sup> )	Flooded area after dam failure (m <sup>2</sup> )			Relative increase in flooded area as a result of dam breaching (%)		
		Instantaneous	Gradual (10 min)	Gradual (60 min)	Instantaneous	Gradual (10 min)	Gradual (60 min)
Roughness height $k_s = 0.1$ m							
Base flow	447 660	601 184	577 108	539 536	34.29	28.92	20.52
20-year	529 204	695 236	632 712	590 280	31.37	19.56	11.54
50-year	556 816	757 300	707 024	637 320	36.01	26.98	14.46
Roughness height $k_s = 0.3$ m							
Base flow	493 028	635 484	599 948	561 700	28.89	21.69	13.93
20-year	604 988	741 964	689 388	636 916	22.64	13.95	5.28
50-year	747 764	898 048	859 004	824 928	20.10	14.88	10.31