

Appendix

December 24, 2023

Probability of Occurrence		Severity				
		Negligible	Minor	Serious	Critical	Catastrophic
	Frequent					
	Probable					
	Occasional					
	Remote					
	Improbable					

Table 1: Risk Assessibility

Probability of Occurrence		Severity				
		Negligible	Minor	Serious	Critical	Catastrophic
	Frequent					
	Probable					
	Occasional					
	Remote					
	Improbable					

Table 2: Risk Assessment Criteria

The grey areas are areas where risks are not acceptable and will be eliminated or moved to areas of less severity or occurrence probabilities. Since death and permanent impairments are not acceptable, the two severity levels are not acceptable. Because the device should act in place of a lifeguard, it should not be likely to cause further harm that require professional treatments, hence the partially unacceptable severity level “serious.”

Terms	Description
Negligible	Inconvenience or temporary discomfort
Minor	Results in temporary impairment not requiring professional medical intervention
Serious	Results in temporary impairment requiring professional medical intervention
Critical	Results in permanent impairment or life-threatening injury
Catastrophic	Result in rescuer, rescuee, bystanders’ death

Table 3: Severity Levels Specifications

Terms	Description
Improbable	$< 10^{-5}$
Remote	$< 10^{-4}$ <i>and</i> $\geq 10^{-5}$
Occasional	$< 10^{-3}$ <i>and</i> $\geq 10^{-4}$
Probable	$< 10^{-2}$ <i>and</i> $\geq 10^{-3}$
Frequent	$\geq 10^{-1}$

Table 4: Probability of Occurrence Specifications