

HEALTH HAZARD ASSESSMENT AND PRIORITIZATION TOOL

2017

BIOLOGICAL HAZARDS

HAZARD	PROBABILITY*	HEALTH SEVERITY	HEALTH SYSTEM IMPACT			MITIGATION CAPACITY		RISK SCORE
			PUBLIC HEALTH	EMS/ HEALTHCARE	BEHAVIORAL/ MENTAL HEALTH	RESPONDER AGENCIES	COMMUNITY AGENCIES	
	Improbable: 0 Remote: 1 Occasional: 2 Probable: 3 Frequent: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	
Aerosolized Anthrax	1	4	4	4	4	2	1	2.25
Agroterrorism	1	2	3	3	2	2	2	0.50
Botulism	1	3	3	2	2	2	1	0.75
Emergent Disease	2	3	4	3	3	3	2	1.88
Intentional Food Contamination	2	3	3	3	3	2	2	1.88
Natural Food Contamination	4	2	2	2	2	2	2	1.00
Pandemic Flu	2	3	4	4	4	3	2	2.63
Pneumonic Plague	1	4	4	3	3	2	1	1.75
Smallpox	1	3	4	3	3	2	1	1.31
Tularemia	1	1	3	3	2	2	1	0.31
Vectorborne	2	2	2	2	2	1	1	1.00
Water Contamination	2	2	3	3	4	3	2	1.25

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CHEMICAL & RADIOLOGICAL HAZARDS

HAZARD	PROBABILITY*	HEALTH SEVERITY	HEALTH SYSTEM IMPACT			MITIGATION CAPACITY		RISK SCORE
			PUBLIC HEALTH	EMS/ HEALTHCARE	BEHAVIORAL/ MENTAL HEALTH	RESPONDER AGENCIES	COMMUNITY AGENCIES	
	Improbable: 0 Remote: 1 Occasional: 2 Probable: 3 Frequent: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	
Blister Agent	1	3	3	3	3	1	1	1.31
HazMat Incident – Fixed Facility	2	2	2	3	2	3	2	0.50
HazMat Incident –Transportation	3	3	2	3	3	3	2	1.69
Improvised Explosive Device	2	3	2	3	2	2	1	1.50
Mass Casualty HazMat Incident	1	3	3	3	3	3	2	0.75
Nerve Agent	1	4	3	3	2	2	1	1.25
Nuclear Attack – 10 Kiloton Device	1	4	4	4	4	3	2	1.75
Nuclear Facility Failure	1	3	4	4	4	4	4	0.75
Radiological Dispersal Device	1	3	3	4	3	3	3	0.75
Radiological Incident – Fixed Facility	1	3	2	3	3	3	2	0.56
Ricin	1	3	2	3	2	2	1	0.75
Small Casualty HazMat Incident	2	2	2	2	1	3	2	0.00

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TECHNOLOGICAL HAZARDS

HAZARD	PROBABILITY*	HEALTH SEVERITY	HEALTH SYSTEM IMPACT			MITIGATION CAPACITY		RISK SCORE
			PUBLIC HEALTH	EMS/ HEALTHCARE	BEHAVIORAL/ MENTAL HEALTH	RESPONDER AGENCIES	COMMUNITY AGENCIES	
			NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	
Communications Failure	3	2	3	4	4	3	3	1.88
Cyber Attack	3	1	2	3	2	1	1	0.94
Electrical Failure	2	3	3	4	4	3	1	2.63
Information Systems Failure	3	1	3	3	3	1	1	1.31
Sewer Failure	2	2	2	3	3	3	1	1.00
Supply Shortage	2	3	3	4	3	2	2	2.25
Transportation Failure	2	2	2	3	3	3	1	1.00
Water Supply Contamination	2	3	3	4	3	3	2	1.88
Water Supply Disruption	1	2	3	3	3	3	2	0.50

HEALTH HAZARD ASSESSMENT AND PRIORITIZATION TOOL

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NATURAL HAZARDS

HAZARD	PROBABILITY*	HEALTH SEVERITY	HEALTH SYSTEM IMPACT			MITIGATION CAPACITY		RISK SCORE
			PUBLIC HEALTH	EMS/ HEALTHCARE	BEHAVIORAL/ MENTAL HEALTH	RESPONDER AGENCIES	COMMUNITY AGENCIES	
	Improbable: 0 Remote: 1 Occasional: 2 Probable: 3 Frequent: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Negligible: 1 Marginal: 2 Critical: 3 Catastrophic: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	NA: 0 Low: 1 Moderate: 2 High: 3 Extreme: 4	
Civil Disorder	2	1	1	2	2	2	1	0.25
Climate Change	4	3	2	1	1	1	1	1.50
Coastal Erosion	4	1	1	2	1	2	0	0.50
Dam Failure	1	3	3	3	2	3	3	0.38
Drought	3	2	2	1	1	1	1	0.75
Earthquake - Catastrophic	2	4	4	4	4	1	2	4.50
Earthquake - Moderate	2	3	3	3	3	2	3	1.50
Expansive Soil	2	1	1	1	1	1	1	0.13
Extreme Summer Weather	3	2	2	2	2	3	2	0.38
Fire - Large-scale Urban	2	3	3	3	3	2	3	1.50
Flood	3	3	3	3	3	2	3	2.25
Hailstorm	1	1	1	1	1	1	1	0.06
Land Subsidence	1	1	1	1	0	1	1	0.00
Landslide	3	2	2	3	2	2	1	1.50
Severe Winter Storm	2	3	3	3	3	2	2	1.88
Storm Surge	2	2	2	2	1	1	1	0.75
Thunderstorm & Lightning	4	1	1	1	1	1	1	0.25
Tornado	1	2	1	1	1	1	1	0.13
Tsunami	2	2	2	3	2	3	3	0.25
Wildfire	4	3	3	3	3	4	3	1.50
Windstorm	2	1	2	2	2	2	1	0.38
Levee Failure	3	2	2	1	1	4	3	-1.13

Comparative Risk Scores

2017

Hazard	Risk Score	Rank
Aerosolized Anthrax	2.25	4
Agroterrorism	0.50	39
Blister Agent	1.31	21
Botulism	0.75	31
Civil Disorder	0.25	46
Climate Change	1.50	15
Coastal Erosion	0.50	39
Communications Failure	1.88	7
Cyber Attack	0.94	30
Dam Failure	0.38	43
Drought	0.75	31
Earthquake - Catastrophic	4.50	1
Earthquake - Moderate	1.50	15
Electrical Failure	2.63	2
Emergent Disease	1.88	7
Expansive Soil	0.13	49
Extreme Summer Weather	0.38	43
Fire - Largescale Urban	1.50	15
Flood	2.25	4
Hailstorm	0.06	51
HazMat Incident – Fixed Facility	0.50	39
HazMat Incident –Transportation	1.69	14
Improvised Explosive Device	1.50	15
Information Systems Failure	1.31	21
Intentional Food Contamination	1.88	7
Land Subsidence	0.00	52
Landslide	1.50	15
Levee Failure	-1.13	54
Mass Casualty HazMat Incident	0.75	31
Natural Food Contamination	1.00	26
Nerve Agent	1.25	24
Nuclear Attack – 10 Kiloton Device	1.75	12
Nuclear Facility Failure	0.75	31
Pandemic Flu	2.63	2
Pneumonic Plague	1.75	12
Radiological Dispersal Device	0.75	31
Radiological Incident – Fixed Facility	0.56	38
Ricin	0.75	31
Severe Winter Storm	1.88	7
Sewer Failure	1.00	26
Small Casualty HazMat Incident	0.00	52
Smallpox	1.31	21
Storm Surge	0.75	31
Supply Shortage	2.25	4

Comparative Risk Scores

2017

Hazard	Risk Score	Rank
Thunderstorm & Lightning	0.25	46
Tornado	0.13	49
Transportation Failure	1.00	26
Tsunami	0.25	46
Tularemia	0.31	45
Vectorborne	1.00	26
Water Contamination	1.25	24
Water Supply Contamination	1.88	7
Water Supply Disruption	0.50	39
Wildfire	1.50	15
Windstorm	0.38	43

Overall Ranking

2017

Hazard	Risk Score	Rank
Pandemic Flu	2.625	2
Water Contamination	1.25	24
Wildfire	1.5	15
HazMat Incident –Transportation	1.6875	14
Communications Failure	1.875	7
Earthquake - Catastrophic	4.5	1
Water Supply Contamination	1.875	7
Flood	2.25	4
Intentional Food Contamination	1.875	7
Sewer Failure	1	26
Vectorborne	1	26
Nuclear Attack – 10 Kiloton Device	1.75	12
Aerosolized Anthrax	2.25	4
Earthquake - Moderate	1.5	15
Electrical Failure	2.625	2
Emergent Disease	1.875	7
Water Supply Disruption	0.5	39
Nerve Agent	1.25	24
Blister Agent	1.3125	21
Improvised Explosive Device	1.5	15
Natural Food Contamination	1	26
Severe Winter Storm	1.875	7
Transportation Failure	1	26
Pneumonic Plague	1.75	12
Radiological Dispersal Device	0.75	31
Smallpox	1.3125	21
Botulism	0.75	31
Fire - Largescale Urban	1.5	15
HazMat Incident – Fixed Facility	0.5	39
Landslide	1.5	15
Mass Casualty HazMat Incident	0.75	31
Nuclear Facility Failure	0.75	31
Ricin	0.75	31
Supply Shortage	2.25	4
Information Systems Failure	1.3125	21
Tularemia	0.3125	45
Coastal Erosion	0.5	39
Dam Failure	0.375	43
Thunderstorm & Lightning	0.25	46
Agroterrorism	0.5	39
Civil Disorder	0.25	46
Drought	0.75	31
Extreme Summer Weather	0.375	43

Overall Ranking

2017

Hazard	Risk Score	Rank
Storm Surge	0.75	31
Tsunami	0.25	46
Windstorm	0.375	43
Cyber Attack	0.9375	30
Radiological Incident – Fixed Facility	0.5625	38
Climate Change	1.5	15
Tornado	0.125	49
Hailstorm	0.0625	51
Expansive Soil	0.125	49
Land Subsidence	0	52
Small Casualty HazMat Incident	0	52
Levee Failure	-1.125	54

2017

Top 10 Hazards

