

Location Risk Intelligence





Single Risk Assessment Report

03/31/2022













Single Risk Assessment Report

Risk Location	New York, USA
Longitude/Latitude	-74.0071, 40.7146
Munich Re Risk Location Quality	Coordinates (100)
People per km²	Class 5: ≥ 200
Elevation	64m
Distance to Coast	662m
Distance to Fault	> 50 km


NATHAN: Risk Scores

Overall Risk Score		High (19)
Earthquake Risk Score		Low (1)
Storm Risk Score		Medium (14)
Flood Risk Score		Low (4)

NATHAN: Hazard Scores

	low	high	hazard rating
Earthquake			Zone 0: MM V and below
Volcanoes			No hazard
Tsunami			No hazard
Tropical Cyclone			Zone 1: 142 - 184 km/h
Extratropical Storm			Zone 1: 81 - 120 km/h
Hail			Zone 3
Tornado			Zone 3
Lightning			Zone 3: 4 - 10
River Flood			Zone 0 minimal flood risk
Flash Flood			Zone 4
Storm Surge			No hazard
Wildfire			No hazard

NATHAN: Additional Information

	low	high	hazard rating
Soil and Shaking			Class 4: stiff soil

General Location Information: Flood Defense Information

Flood Defense SoP

100

Legend

Overall Risk Score

- Low
- Medium
- High
- Extreme

The overall risk score includes on all provided NATHAN hazard scores with different weights in combination of an annual loss value for standard industrial business. It has to be taken into account that the wildfire score was not taken into account for the Risk Score split. This could cause small deviations between the overall Risk Score value and the sum of the individual Earthquake, Storm and Flood Risk Score.

Flood Risk Score

- Low
- Medium
- High
- Extreme

Includes River Flood, Flash Flood and Storm Surge Risk.

Tsunami

- No hazard
- Zone 0 minimal flood risk
- Zone 1000 year return period
- Zone 500 year return period
- Zone 100 year return period

Zones based on 100m SRTM (Version 4.1) elevation model, taking into account height above sea level and distance from coasts.

Hail

- Zone 1: low
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Zone 6: high

Frequency and intensity of hailstorms.

River Flood

- Zone 0 minimal flood risk
- Zone 500 year return period
- Zone 100 year return period

Areas threatened by extreme floods. JBA flood maps with return periods of 100 and 500 years.

Earthquake Risk Score

- Low
- Medium
- High
- Extreme

Includes the Earthquake, Volcano and Tsunami Risk.

Earthquake

- Zone 0: MM V and below
- Zone 1: MM VI
- Zone 2: MM VII
- Zone 3: MM VIII
- Zone 4: MM IX and above

Probable maximum intensity (MM: modified Mercalli scale) with an exceedance probability of 10% in 50 years (equivalent to a „return period“ of 475 years) for medium subsoil conditions.

Tropical Cyclone

- Zone 0: 76 - 141 km/h
- Zone 1: 142 - 184 km/h
- Zone 2: 185 - 212 km/h
- Zone 3: 213 - 251 km/h
- Zone 4: 252 - 299 km/h
- Zone 5: ≥ 300 km/h

Probable maximum intensity with an exceedance probability of 10% in 10 years (equivalent to 'return period' of 100 years).

Tornado

- Zone 1: low
- Zone 2
- Zone 3
- Zone 4: high

Frequency and intensity of tornados.

Flash Flood

- Zone 1: low
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Zone 6: high

Frequency and intensity of flash floods.

Storm Risk Score

- Low
- Medium
- High
- Extreme

Includes the Tropical cyclone, Extratropical storm, Hail, Tornado and Lightning Risk.

Volcanoes

- No hazard
- Unclassified
- Zone 1: minor hazard
- Zone 2: moderate hazard
- Zone 3: high hazard

Secondary effects that can occur as a result of the large-scale distribution of volcanic particles (e.g. climate impacts, supraregional ash deposits) are not considered

Extratropical Storm

- No hazard
- Zone 0: ≤ 80 km/h
- Zone 1: 81 - 120 km/h
- Zone 2: 121 - 160 km/h
- Zone 3: 161 - 200 km/h
- Zone 4: > 200 km/h

Probable maximum intensity with an average exceedance probability of 10% in ten years (equivalent to a „return period“ of 100 years). Areas were examined in which there is a high frequency of extratropical storms (approx. 30°–70° north and south of the equator).

Lightning






- Zone 1: 0,2 - 1
- Zone 2: 1 - 4
- Zone 3: 4 - 10
- Zone 4: 10 - 20
- Zone 5: 20 - 40
- Zone 6: 40 - 80

Global frequency of lightning strokes per km² and year. Lightning frequency is determined by counting the total number of lightning flashes independently of whether they strike the ground or not.







Storm Surge

- No hazard
- Zone 1000 year return period
- Zone 500 year return period
- Zone 100 year return period

Detailed calculation for coasts and the shores of large lakes. Zones based on 30m ALOS Digital Elevation Model (DEM), taking into account wind speed and bathymetry (underwater depth of lake or ocean floors). Does not consider dykes.

Wildfire	
	No hazard
	Zone 1: low
	Zone 2
	Zone 3
	Zone 4: high

The effects of wind, arson and fire-prevention measures are not considered.

Soil and Shaking	
	Class 1: low, hard bedrock
	Class 2: rock
	Class 3: soft rock/dense soil
	Class 4: stiff soil
	Class 5: soft soil
	Class 6: high, reclaimed land

Underground conditions influencing earthquake intensity (based on geological, soil and hydrological information).

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