

## Landslide-related fatalities in New Zealand

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### 8 July 1843

#### Earthquake at Wanganui

On 8 July 1843, much of the North Island was shaken by a powerful earthquake with an estimated magnitude of 7.5. The earthquake was probably centred near Wanganui. Many people there reported that it was difficult to walk during the earthquake. Two were killed by a landslide caused by the quake – the earliest written report of an earthquake causing death in New Zealand. Many houses were damaged, and a brick church at Pūtiki was destroyed. Deep fissures opened up in the bed of the Wanganui River, and a section of Shakespeare Cliff fell into the river.

### 7 May 1846

#### Waihi landslide

Some years before 1846, a landslide occurred on the side of Kakaramea, the mountain above Waihi settlement at the southern end of Lake Taupō. The slide dammed a stream, forming a lake about 600 metres above the Māori village of Te Rapa. On 7 May 1846, the landslide dam collapsed during heavy rain. The water and debris created a mud flow that overwhelmed the village, killing the chief Te Huehue and 54 members of his tribe.

### 26 July 1863

#### Disaster at Māori Point

In mid-July 1863, a landslide blocked a steep gully running into the Shotover River at Māori Pt, damming a local stream. About two weeks after the landslide, on 26 July 1863, the dam of debris burst during torrential rain. The resulting flood overwhelmed huts where goldminers were staying, killing 13 men.

### 14 August 1863

#### Avalanche in Central Otago

In the winter of 1863, a party of 49 goldminers was trapped at isolated diggings at Serpentine Gully, near Dunstan. They had pitched their tents at the base of a large cliff. On the morning of 14 August, an immense mass of snow on the top of the cliff collapsed, forming an avalanche that swept over the camp. Nine men whose tents were on the outer fringes of the camp got clear, but 40 miners were buried beneath dozens of metres of snow and died.

### 20 March 1910

#### Waihi landslide

Around 9 a.m. on 20 March 1910, people in the village of Waihi heard a noise like cannon fire. As they watched, a section of steaming hillside collapsed into the Waimatai Valley above the village and sped downslope. In this second disaster at the settlement, most people escaped to higher ground, but one man was overcome by the landslide. It entered the lake, creating a 3-metre wave that crossed the bay to the far shore, nearly drowning some children. The cause may have been a hydrothermal eruption.

### 10 September 1914

#### Disaster at White Island

White Island is New Zealand's most active volcano. Early this century, attempts were made to mine the abundant beds of valuable sulfur on the island. In the early hours of 10 September 1914, a section of the volcanic cone collapsed, accompanied by a volcanic explosion. A large flow of hot mud, rocks and volcanic gases swept down through the mining camp where 10 miners were staying. Search parties who later reached the island found no trace of the men or the camp buildings.

### 8 November 1918

#### Mataroa train wreck

On 8 November 1918, the Auckland to Wellington express hit a landslide, 2 kilometres north of Mataroa. The train's fireman spotted falling earth, rocks and trees as the train rounded a curve. The driver braked, but the train ploughed into the debris. Four people in the postal van and first passenger carriage were killed, and eight others were hospitalised. A second slip came down while passengers were tending those who had been hurt, burying the engine.

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**6 July 1923****Main Trunk Railway disaster**

At 5:50 a.m. on 6 July 1923, the south-bound Auckland to Wellington express ploughed into a landslide that had been triggered by rain. The train was on the line north of Taumarānui, and was rounding a sharp bend between the high banks of a cutting. The engine, postal van and three passenger carriages jumped the rails. The second carriage overran the first, and the front end of the third carriage telescoped. Carriages further back were unaffected. The locomotive was nearly buried – the driver and fireman escaped, but were burned by escaping steam. Altogether, 17 people were killed and 30 seriously injured.

**17 June 1929****Murchison earthquake**

On 17 June 1929, at 10.20. a.m., a massive, magnitude 7.8 earthquake was felt from Auckland to Dunedin. Centred near the town of Murchison in the north of the South Island, it triggered at least 50 large landslides. Of the 17 people who died in the quake, 14 were the victims of landslides. Slides blocked the Buller and Maruia rivers. Seddonville was damaged by floods when a landslide dam on the Mohikini River burst. Road damage was so extensive that many roads were not re-opened for months.

**3 February 1931****Hawke's Bay earthquake**

New Zealand's deadliest earthquake occurred at 10:48 a.m. on 3 February 1931 in Hawke's Bay. In the magnitude 7.5 quake, 256 people died – 161 in Napier, 93 in Hastings and 2 in Wairoa. Most were killed by the collapse of buildings and falling debris. Some died in landslides. In Napier, fires broke out and burned uncontrolled for two days because water pipes were broken. Fires gutted four hectares of the business district. Sections of the Napier area were raised nearly 3 metres, and part of Ahuriri Lagoon was drained. The largest aftershock was a powerful magnitude 7.3 earthquake. It was unusual in that it occurred 10 days after the main earthquake.

**30 August 1936****Train wreck near Paraparaumu**

On 30 August 1936, in rainy weather, the Auckland to Wellington express was derailed when it ploughed into a slip across the tracks near Paraparaumu. The engine toppled down a 3-metre embankment, landing on its side, and five carriages ran off the rails. The tender tore the roof off the first passenger carriage and the carriage walls fell outward onto the track. Many carriages were wedged against each other, temporarily trapping passengers inside. Three passengers were admitted to hospital, and one later died.

**20 August 1946****Train wreck in the Manawatū Gorge**

On 20 August 1946, at 4:17 a.m., a goods train travelling through the Manawatū Gorge hit a landslide triggered by heavy rain. The engine, tender and three wagons went over the bank of the Manawatū River, and toppled 18 metres down the bank into the flood-swollen river. The engine driver and fireman were both killed.

**24 December 1953****Tangiwai disaster**

On 24 December 1953, part of the wall of Crater Lake on Mount Ruapehu collapsed, sending a surge of water and rock debris down the Whangaehu River. Near Tangiwai the flood destroyed the railway bridge minutes before the Wellington-Auckland express train was about to cross. The engine and six carriages fell into the river and 151 lives were lost. It was the worst volcano-related disaster in New Zealand this century.

**7 January 1963****Rockfall at Pioneer Hut**

Pioneer Hut, in the upper reaches of Fox Glacier in Westland National Park, is popular with climbers. About 2.15 a.m. on 7 January 1963, a rockfall struck the hut, caving in the eastern side. Eight people were asleep there. One was killed, another was trapped under a heavy boulder, and three others were injured. It took eight hours for the survivors to free the trapped climber. They radioed for help, but had

weather prevented aid from arriving until 4:30 p.m. on 8 January. A plane with a medical team reached the hut then, but could not take off until the following morning. Pioneer Hut was later rebuilt.

#### **24 May 1968**

##### **Inangahua earthquake**

On 24 May 1968, at 5.25 a.m., the northern South Island was rocked by a magnitude 7.1 earthquake that was felt from Dargaville to Invercargill. It was centred near the town of Inangahua Junction, near Murchison, and caused massive landslides. These killed two people and blocked roads through the region for months.

A large slip temporarily blocked the Buller River, backing up the river for over 7 kilometres and to depths of up to 30 metres. Hundreds of people were evacuated by helicopter from the valley downstream.

#### **20 December 1976**

##### **Wellington–Hutt Valley floods**

On 20 December 1976, heavy rain caused widespread flooding and landslides in Wellington and the Hutt Valley. More than 350 millimetres of rain fell in 24 hours. The Hutt River burst its stopbanks, and in Petone workers took refuge on the roofs of their factories. More than 40 were rescued from the roof of one factory alone, two at a time, by helicopter. Landslides destroyed three houses in Stokes Valley and several in the western Hutt Valley. A boy was killed by a collapsing wall when a landslide struck a local hall in Crofton Downs.

#### **2–3 December 1979**

##### **Debris flow at Klondyke Corner campground**

Heavy rain in Arthur's Pass National Park on 2–3 December 1979 caused extensive flooding and road damage. At the Klondyke Corner camping area, four people sleeping in a tent near the shelter were killed, buried under a flow of mud, rock and trees. The debris flow formed when a slip collapsed into a flooded stream channel on the mountainside above the camping area.

#### **17 February 1985**

##### **Te Aroha debris flow**

On 16–17 February 1985, heavy rain fell in the Te Aroha area. A huge jam of debris accumulated at the top of several streams high on Mt Te Aroha, behind the town. On the 17th, around 6 a.m., the debris dams gave way, sending an avalanche of water, mud, boulders and logs through the centre of town. The flood killed three people. One girl was swept 1.5 kilometres by the torrent, but was found alive in a tree six hours later. Most of the shops were damaged and more than 50 homes were hit.