

# Falling to Death: Hiking Fatalities on Angels Landing Trail

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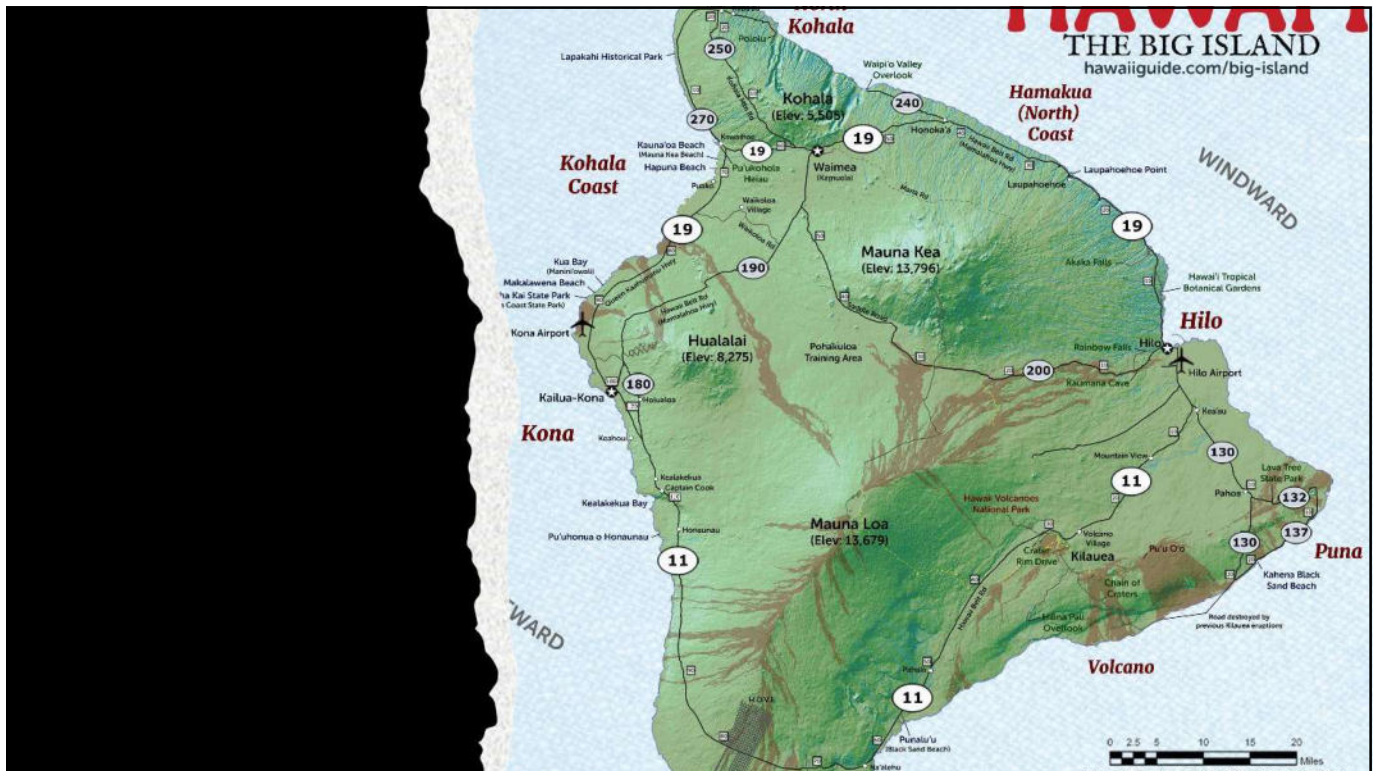
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### Mauna Kea

13,803 ft  
4,207 m

### Mauna Loa

13,679 ft  
4,169 m



**THE EPIDEMIOLOGY AND ETIOLOGY OF VISITOR INJURIES  
IN HAWAII VOLCANOES NATIONAL PARK**

A Dissertation  
by  
TRAVIS WADE HEGGIE

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Original Research

**Viewing Lava Safely: An  
Epidemiology of Hiker  
Injury and Illness in  
Hawaii Volcanoes  
National Park**

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## The Deadliest U.S. National Parks

Deaths recorded in U.S. National Park Service locations  
(2007-2024)

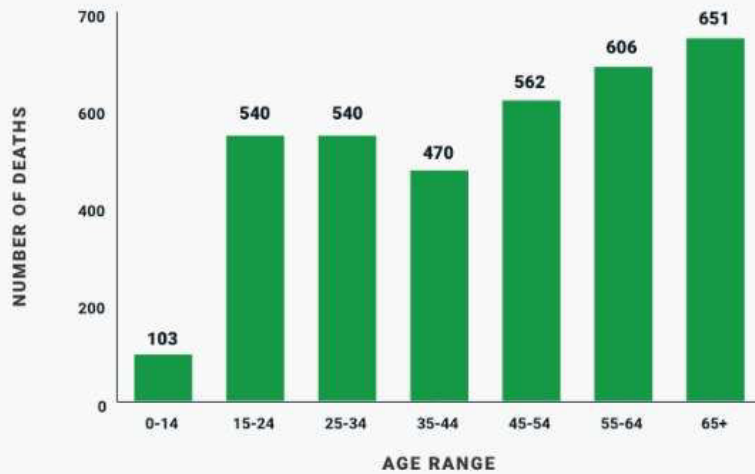


Source: National Parks Service data via Panish Law



## Who Dies in U.S. National Parks

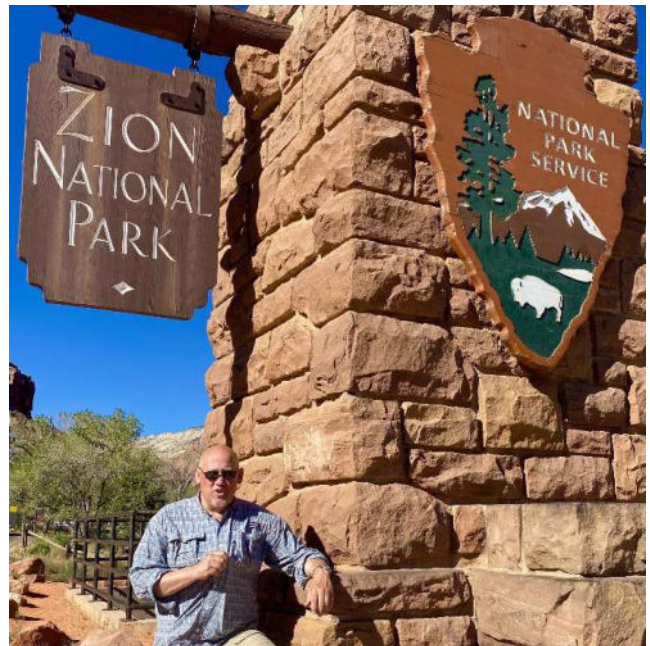
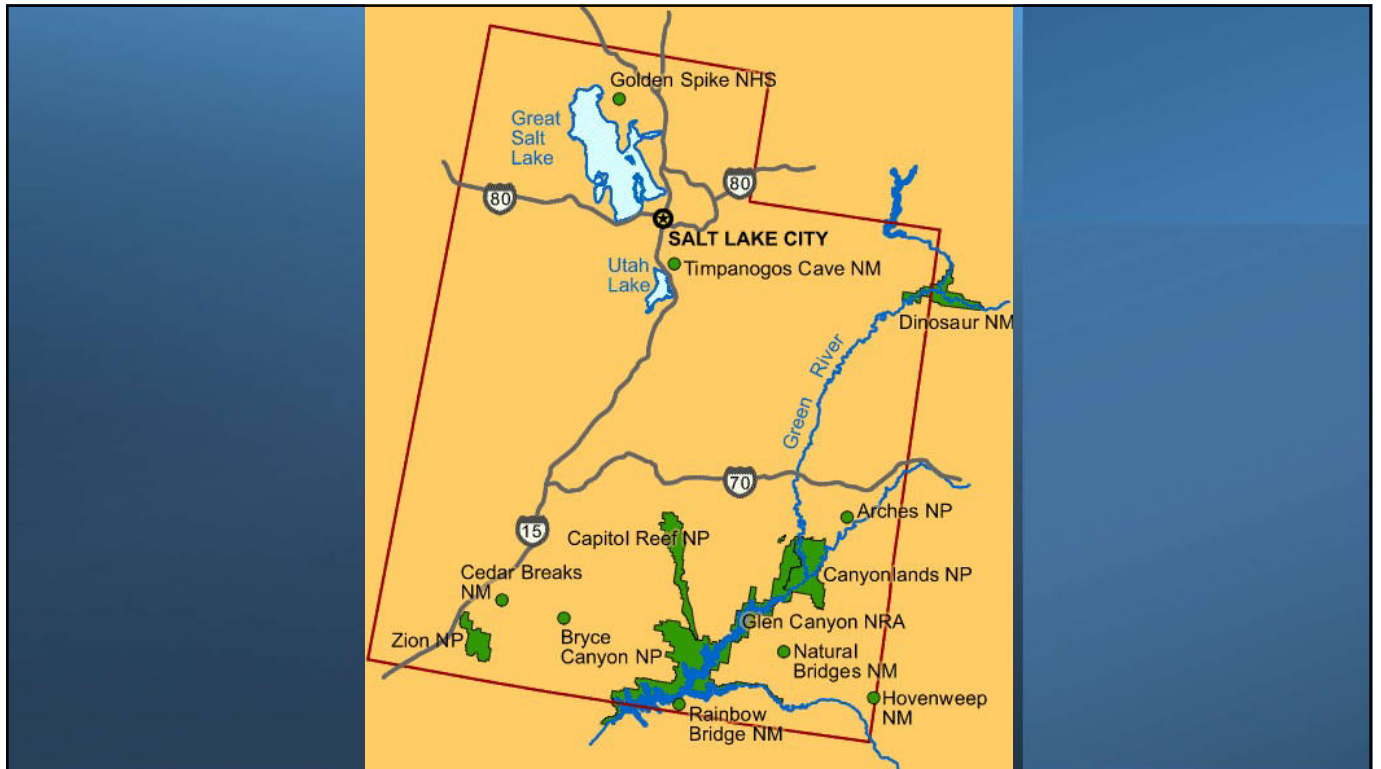
TOTALS BY AGE FROM 2007 - 2024

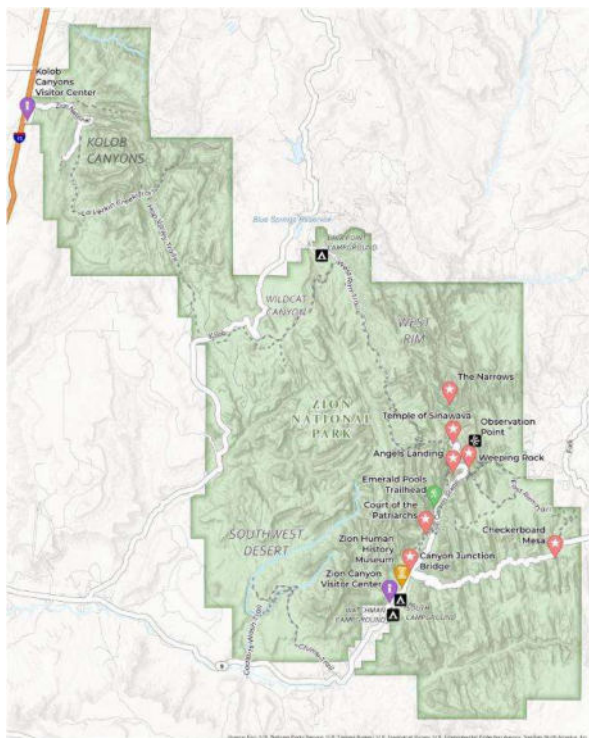


SOURCE: 1POINT21 INTERACTIVE ANALYSIS OF NPS DATA









**Area:** 146,597 acres (229.058 sq mi; 59,326 ha; 593.26 km<sup>2</sup>)

**Established:** November 19, 1919

**Visitors:** 4,623,238 per year

**Activities:** hiking, canyoneering, horse trails, stargazing, camping, scenic drives, traffic congestion.

**Table 3.** Total reported Search and Rescue (SAR) operations for National Park Service units in Utah, 2001-2005.

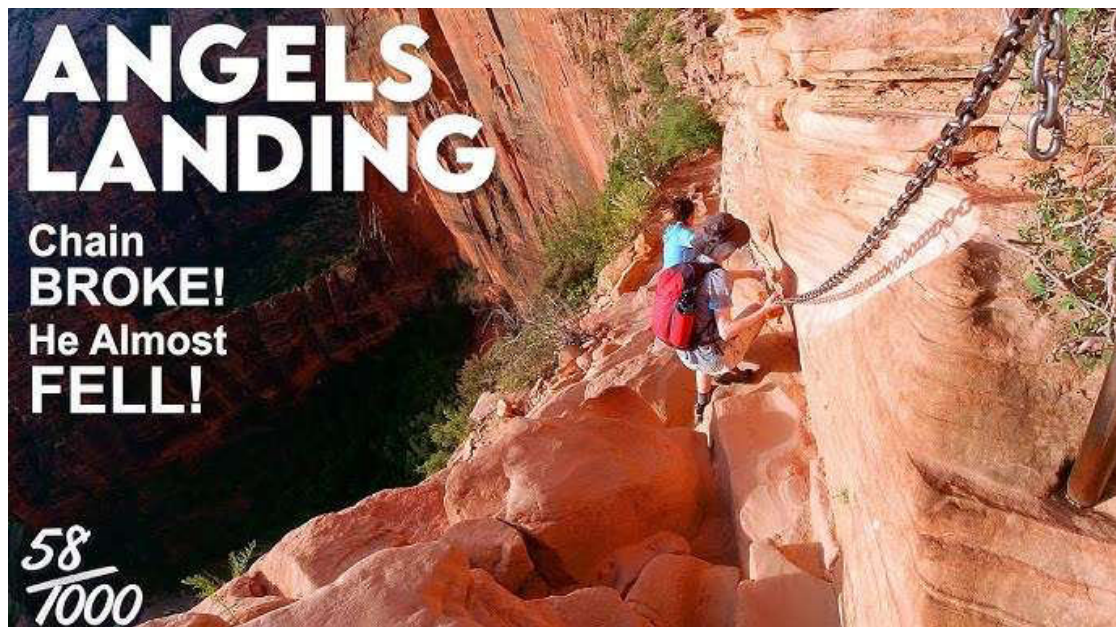
<i>Park</i>	2001	2002	2003	2004	2005	Total
ARCH	21	22	24	27	23	117
BRCA	8	12	13	17	15	65
CANY	26	44	43	32	20	165
CARE	7	4	6	6	9	32
GLCA	161	106	119	101	77	564
ZION	87	38	38	41	43	247
Total	310	226	243	224	187	1190

Source: Heggie TW and Heggie TM. Search and Rescue Trends and the Emergency Medical Service Workload in Utah's National Parks. *Wilderness & Environmental Medicine* 2008;19(3):164-171

**Table 8.** Reported subject activity at the time Search and Rescue operations were initiated in Utah National Park Service units, 2003-2005.

Activity	ARCH	BRCA	CANY	CARE	GLCA	ZION	Total
Aircraft (motorized)	0	3	0	0	2	0	5
Aircraft (non-motorized)	0	0	2	0	0	0	2
Biking	2	0	8	0	0	0	10
Boating (motorized)	0	0	5	0	191	0	196
Boating (non-motorized)	0	0	7	0	11	0	18
Canyoneering	0	0	30	2	4	62	98
Climbing (scrambling)	13	0	5	0	10	0	28
Climbing (technical roped)	2	0	4	0	2	2	10
Climbing (technical unroped)	0	0	0	0	3	0	3
Fishing	0	0	0	0	1	0	1
Foul Play	0	0	0	0	1	0	1
Hiking (overnight)	0	0	4	0	13	8	25
Hiking (day hike)	54	41	38	12	25	51	221
Hunting / Gathering	0	0	0	0	1	0	1
Stock (animal) riding	1	5	0	0	0	0	6
Suicide	1	0	0	0	3	1	5
Swimming	0	0	1	0	22	0	23
Vehicle / Driving	1	1	6	2	7	0	17
Other / Unknown	2	1	0	0	6	8	17

Source: Heggie TW and Heggie TM. Search and Rescue Trends and the Emergency Medical Service Workload in Utah's National Parks. *Wilderness & Environmental Medicine* 2008;19(3):164-171





**Distance:** 8 km roundtrip hike

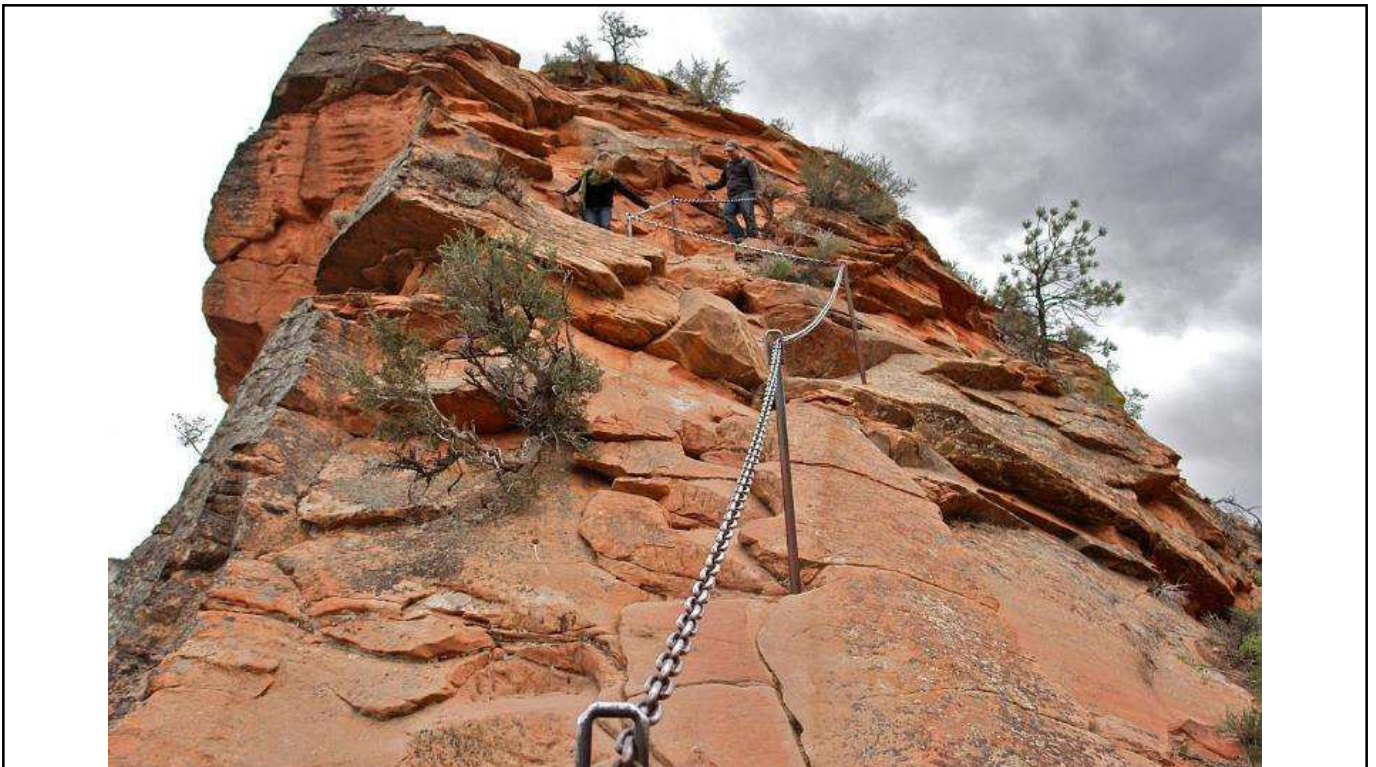
**Time:** 2 - 4 hours

**Elevation Gain:** 454 meters

- A strenuous significant elevation gain, steep drop-offs, and the need for caution,
- Famous for its breathtaking views and challenging final ascent on a narrow ridge with chains to assist hikers.

#### Why it's considered dangerous

- Sheer drop-offs
- Chain section
- Slippery conditions
- Children, people with a fear of heights, and inexperienced hikers.



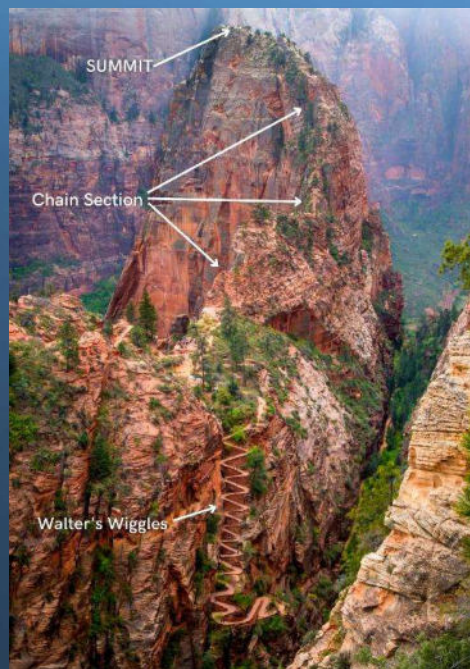
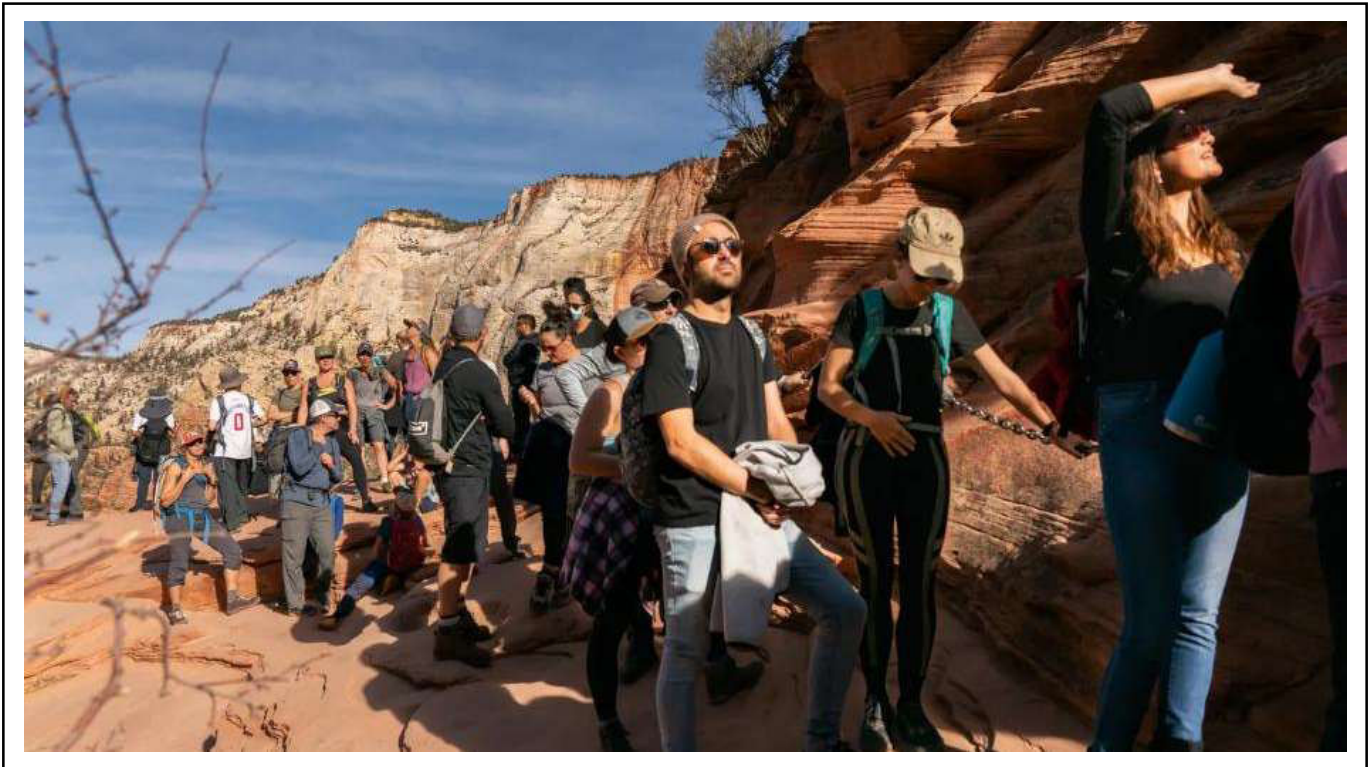




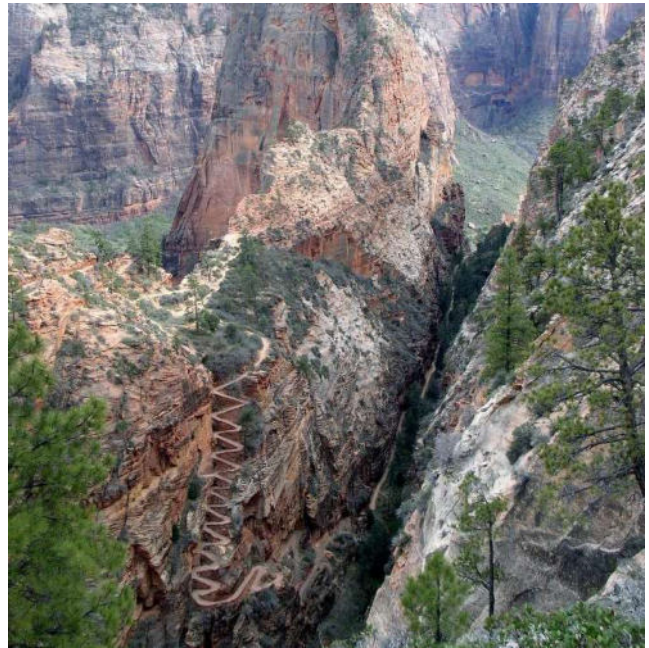
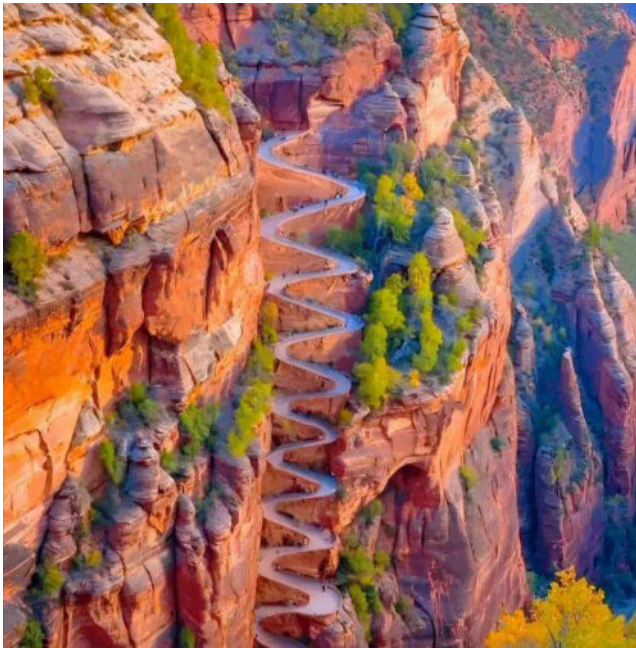
















NARROW ROUTE WITH  
CLIFF EXPOSURES  
HAZARDOUS DURING  
THUNDERSTORMS, DARKNESS  
AND ICE / SNOW CONDITIONS



### Case Report 1

- A 14-year old male from California fell 245 m from a point near the summit of Angels Landing. The victim was part of a Boy Scout troop comprised of 40 hikers. The scouts were crowded together making trail conditions dangerous. At the time of the incident (1430 hours) the victim had ventured away from the main trail and was attempting to climb down to a lower ledge out of his reach. The victim had been dared by other scouts to reach the ledge and carve his name in the sandstone rock. Witnesses stated there was no adult supervision and the scouts were behaving carelessly in their movements near the edge of the trail. At 1635 hours, a helicopter located the body of the victim below the southeast face of the trail and lowered two rescue personnel into the area. No description of the victim's injuries was provided other than the case being classified as a traumatic fatality resulting from a fall from 245 m in height. The search and rescue costs for the incident totaled USD \$20,084.00.

### Case Report 2

- A 63-year old female from California was hiking solo when she fell 220 m to her death. At 1613 hours, Park Rangers were informed a hiker had fallen from a northern cliff face of Angels Landing referred to as Scouts Lookout. The fall point was just prior to a first set of chains installed by the National Park Service to assist hikers navigate difficult sections of the trail. SAR teams were immediately dispatched to an area below the trail where they found human remains spread throughout the vegetation. The search team did not initially locate a body but at 1845 hrs the team utilized binoculars to establish a possible fall line from the upper part of the trail. This enabled the team to locate the victim on a ledge not visible to the search team below. The team confirmed it as a fatal fall. Park Rangers on scene were able to package the victim before dark but extrication of the body was delayed due to night conditions.

## Case Report 2

At the point of her fall the victim had hiked over 3.2 km and gained 305 m in elevation. In addition, the victim had passed a total of **seven informational signs** describing the difficulty of the hike and the potential dangers on the trail. Investigators learned the victim had **completed another hike** earlier in the day, had no pre-existing health issues, and was not suicidal. Three witnesses to the fall stated the victim had been seated and **dangling her legs over the cliff edge**. They further stated the victim intended to finish the trail but fell from the cliff as she rose to a **standing position**. The weather was clear, dry, and windy with occasional wind gusts between 29-47 km/h at the point of the fall. The incident report stated it was unclear whether a sudden **gust of wind**, **possible vertigo**, or **tripping contributed** to the fall. The extrication of the body required a Grade 5 class climb (difficult, with sustained climbing, high commitment, and few bivouac sites) and a rescue craft to ferry the remains of the body across the Virgin River. Final SAR costs were not reported.



### Case Report 3

At 1425 hours, Zion National Park Dispatch was alerted that a 64-year old male from California had suffered a ground level fall on the switchbacks section of the Angels Landing Trail. The park responded with a four-person litter and personnel with ALS (Advanced Life Support) capabilities. Upon arriving on scene the victim had approximately 0.11 liters of blood spilled on the ground around his head and no palpable carotid pulse. The hiker was otherwise unresponsive and not breathing.

Witnesses to the event stated they saw the victim making multiple stops to rest. During one stop the hiker leaned against a rock wall and collapsed. The hiker hit his head on a rock as he collapsed. A German physician and emergency room nurse witnessed the ground level fall and performed CPR on the dead hiker for 25 minutes. A wheel litter was used to evacuate the victim's body from the trail. Further investigation found the hiker had quadruple bypass heart surgery a year prior and had recently stopped taking his prescriptions due to their high cost and his lack of health insurance. Prior to the hike the victim expressed interest in seeing if he could still hike post-surgery and if the elevation gain on the trail would impact him. The final cause of death was deemed sudden cardiac arrest with the victim expiring in the field.

### Case Report 4

At 1655 hours, Park Dispatch was alerted to a hiker falling from Angels Landing. The reporting party stated the body was in a supine position with a twisted neck and leg but could not confirm if the hiker was deceased. Park Rangers arriving on scene found a young female body close to the entrance of Refrigerator Canyon with injuries incompatible with life. Investigating Rangers determined the victim fell 207 m from the Angels Landing Trail. Family members at the scene identified the victim as a 13-year old female from nearby Colorado City, Arizona. At the time of the fall the victim had been hiking with 12 members of her family but had fallen far behind on the trail.

The victim was wearing sandals and a prairie dress extending to her ankles; a style of dress commonly worn by polygamous groups in Utah. Witnesses who spoke with the victim prior to her fall stated she was alone and had wandered off trail and onto a sandstone ledge. The victim told another hiker she was trying to find an alternate route to the top of Angels Landing. However, the victim did not appear sure of her footing and was leaning against a rock in a nervous manner. None of the family members realized the youth had fallen behind the main family group during their hike. Tracks matching the sandal tread worn by the victim were identified at the point of the fall just off the trail from a second set of chains. These tracks led 6 m to a steep sandstone ledge. A sizeable disturbance in the sand at the cliff edge suggested the victim had slipped on the sandstone. The teenage victim was described as happy and adventurous with no existing health problems.



### Case Report 5

At 1155 hours, Zion National Park Dispatch received multiple reports of a hiker falling from Angels Landing Trail. The victim, a **53-year old male** from Missouri, was part of a large hiking group of **30 people** gathered in the national park for a **wedding** scheduled the next day. Park Rangers searching the base of the trail for any signs of a body described the area as steep and densely covered by trees and shrubs. When eventually located, the body was 46 m below the base of Angels Landing. The point of impact was greater than one meter in diameter and approximately 0.2 m deep.

The exact point of fall from the trail was not identified so no estimate of a fall height was calculated. However, several witnesses to the incident described the victim as an **aggressive hiker** wanting to be noticed by charging ahead of his hiking group. Family members were concerned the hiker was not showing proper respect for the trail and could become dehydrated, tired, and dizzy from his hiking pace. At the time of his fall, the victim was **near the edge** of the trail **jumping from a large rock** to a smaller rock when he lost his balance. During the fall the victim hit a lower ledge and cartwheeled several times before making impact with the ground.

### Case Report 6

- At 0822 hours a Park Volunteer reported finding a deceased body in an area known as Refrigerator Canyon. Hikers descending from Angels Landing first saw the body and informed the Park Volunteer. Park Rangers responding to the incident concurred finding an adult male with major blunt force trauma to his head, torso, and extremities. Blood spatter from the body was also identified on a sandstone wall near the body. No identification was found on the body but rental car keys helped identify the victim as a **45-year old male** from Florida who had been in Las Vegas watching a rugby tournament.
- Interviews with the family of the victim confirmed the family was aware the victim would be **hiking solo** and described him as an experienced and cautious hiker. The victim had been taking anti-depressant medication for eight years but was **not suicidal**. The vertical fall distance from the trail was approximately 192 m. As the victim was **hiking solo** and there were no witnesses to the fall, no specific cause of the fall was reported. Nonetheless, other hikers reported patches of **ice on the trail** that day. A sign posted at the trailhead warned of a strenuous climb, a narrow trail with cliff exposures, a hazardous trail during thunderstorms and darkness, and a conditions conducive to having ice and snow on the trail.

## Case Report 7

- At 0824 hours, Zion National Park Dispatch was notified a 40-year old female had fallen 293 m from the Angels Landing Trail. The victim was hiking with several family members and using hiking poles to assist her trek. She was also wearing new walking shoes purchased several days prior to the hike. The victim had complained the toe box of her new shoes made her feet look large.
- The family hiked at a slow pace and stayed together while ascending 305 m in elevation. At the time of the incident, the victim was walking off-trail dangerously close to the edge of the cliff. Her route was characterized by low lying brush, uneven footing, and loose sand and rock. The victim stumbled as she climbed over the uneven rock, lost her footing, and started to free fall off the cliff. Witnesses stated the victim was talking at the time she stumbled and was not giving her foot placement full attention. The victim was reported to have an uneven gait; the result of childhood skating incident. Investigators determined the most plausible explanation for the fall lies with the loose terrain and physical factors such as fatigue and her uneven gait. No search and rescue costs were reported.

## RESULTS

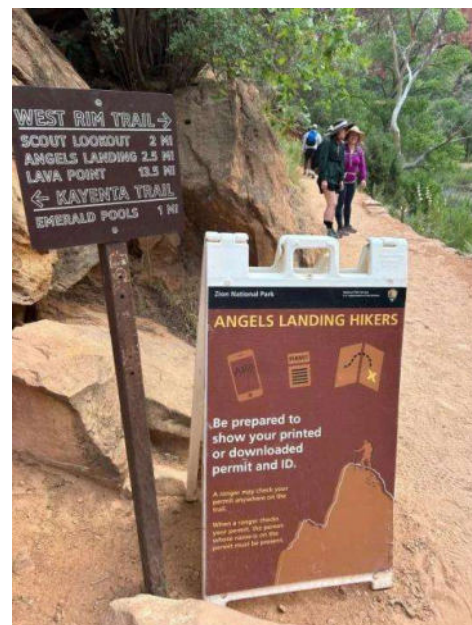
### Environmental Factors:

- Trail Conditions
- Elevation

### Human Factors:

- Pre-Existing Health Conditions
- Unsafe hiking behavior

\*Unsafe hiking behavior played a role in 5 of the 7 deaths.



## Unsafe Hiking Behavior:

- When a hiker displays a lack of situational awareness and does not understand or perceive potential consequences of their actions.
- Hiker can be experienced or inexperienced.
- Examples can be overestimating your abilities, hiking solo, ignoring warning signs.

**Social Factors:** Crowding on the trail and hiking in large groups.





## WANT TO HIKE ANGELS LANDING? Permits are required at all times

Get a permit at [go.nps.gov/AngelsLanding](https://go.nps.gov/AngelsLanding)

