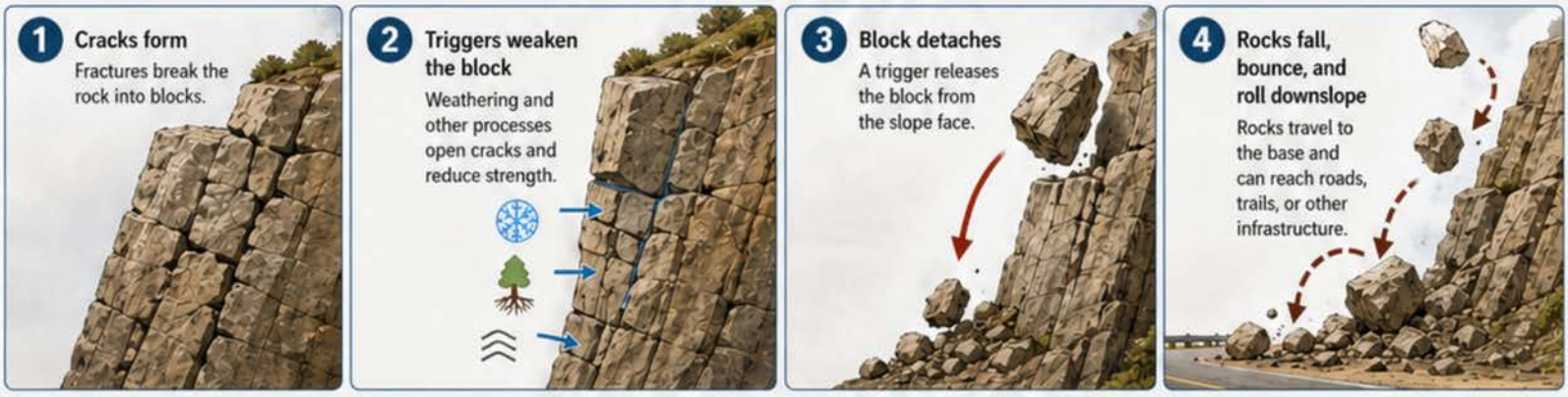
How Rockfalls Happen

Rockfalls occur when fractures and triggers loosen blocks from steep slopes.

HOW A ROCKFALL DEVELOPS



COMMON TRIGGERS THAT CAN RELEASE ROCK BLOCKS

Weathering
Rain, wind, and temperature changes break down rock and open cracks.

Freeze-thaw
Water gets into cracks, freezes, and expands—widening fractures over time.

Root growth
Tree and plant roots can grow into cracks and pry rock blocks apart.

Earthquake shaking
Ground shaking can suddenly trigger movement and cause failure.

Erosion / undercutting
Streams, waves, or runoff remove support at the base, making slopes unstable.

Road cuts / excavation
Cutting into slopes steepens them and removes support, increasing risk.

POLICY TAKEAWAY: Rockfall hazards matter where steep rocky slopes overlook roads, trails, parks, rail lines, or developed areas. Inspection, slope design, barriers, setbacks, and temporary closures can all help reduce risk.