

Simplified Modified Mercalli Scale
(after Wood and Neumann, 1931; Topozada and others, 1981; Dengler and McPherson, 1993)

- I Not felt. Rare reports of slight swaying of trees or chandeliers, ripples appearing on bodies of water, and doors slowly swinging.
- II Felt by a few persons especially those on upper floors, seated or lying down, or by sensitive or nervous persons. Hanging objects may swing, especially if delicately suspended, some may notice ripples on lakes or swimming pools. Little or no noise reported. Sleepers not awakened.
- III Felt by many people inside, although not always immediately recognized as an earthquake; many notice a light vibration, swaying objects, swinging of doors, creaking of walls, light rattling of objects. Parked cars may rock slightly. Most are not frightened. A few light sleepers may be awakened, especially those on upper floors.
- IV Felt by all inside and some outside; many awakened; frightens some, particularly those apprehensive from previous experiences. Vibration like that due to the passing of heavy trucks; distinctive rattling of dishes, glassware, windows, doors and creaking of walls. Hanging objects often swing; pictures on walls may be knocked askew. Liquids in open vessels such as aquariums and toilet bowls may slosh but rarely spill. Standing cars rocked noticeably. Virtually nothing is knocked over or falls from shelves.
- V Felt by most outside; many frightened (particularly those not accustomed to earthquakes), some run outdoors. Many reports of buildings trembling/groaning and swinging objects, moving doors and shutters. A few items may topple or fall, but most do not; occasional broken glassware and crockery. Hanging pictures knock against walls or swing out of place; liquid may spill from well-filled open containers; pendulum clocks stopped or started; trees and bushes shaken slightly. Almost all sleepers awakened.
- VI Felt by all; many are frightened, many perceive difficulty in walking; almost everyone reports a few objects off shelves; some furniture may be displaced; some minor structural damage such as cracks in chimneys and plaster, cracking of large store windows not designed to withstand earthquake shaking. (in heavily populated areas, some injuries may be reported, but typically of a minor nature). Some reports of dead limbs and tree tops falling down; occasional rock fall from steep or unstable slopes. May be noticed by persons driving at slow to moderate speeds - but not always recognized by drivers as an earthquake.
- VII Felt by all; frightens most; most find it difficult to stand or walk; non structural damage is widespread - all report many items off shelves; latched cupboards and refrigerator doors may be thrown open; very heavy items such as wood stoves and concrete tank lids likely to be displaced or tipped over;.noticed by all persons driving cars. Significant damage to unreinforced masonry structures; many chimneys down and damaged; trailers and houses not securely tied to foundations suffer foundation damage. (injuries are likely, but not widespread)
- VIII Felt by all; frightens all, some panic, many report falling or being knocked to ground. Major damage to unreinforced masonry buildings (think Pacific Garden Mall in Santa Cruz!). Difficult to impossible to drive a car; insides of houses 'trashed' - literally everything not securely tied down is displaced. Cracked and disturbed ground common; all very heavy objects (like wood stoves) are displaced. (Injuries widespread and some fatalities likely if earthquake centered in populated areas)
- IX Threshold of structural damage in buildings designed to resist earthquake motion (like SF Bay Bridge). Significant structural damage to some well built wood frame buildings securely tied to foundations and modern engineered larger structures designed to resist strong ground motion. Many underground pipes break, major damage to reservoirs. (Significant loss of life in heavily populated areas)
- X Severe damage to some well-built structures, some collapse. Widespread damage to underground pipes, railroad tracks likely to bend. Most masonry structures are destroyed. (Great loss of life in populated areas)
- XI Severe damage to most well-built wood-frame buildings; supporting piers or pillars of large, well-built bridges are wrecked; major damage to many well-built structures. (Great loss of life in populated areas)
- XII Damage is total and practically all works of construction are damaged or destroyed. Lines of sight and level are distorted. Incidence of objects thrown upwards into the air are widespread and common. (real bad news)