

Tiltmeter Stations

USGS, Cascades Volcano Observatory (CVO)

Tiltmeters measure subtle ground deformation or tiny changes in the slope angle or tilt of the volcano's flanks in response to magma accumulation or withdrawal at depth. When magma forces the ground up, the slope of the adjacent areas will usually tilt away from the center of uplift by only a fraction of a degree. Conversely, if the ground subsides as a consequence of magma moving below, the slope of adjacent areas will tilt toward the center of subsidence.

Currently, CVO operates and maintains 5 tiltmeters within the Mt. St. Helens National Volcanic Monument.



Photograph of a tiltmeter location noting the 2" pole that the solar panel and Omni-directional antenna are mounted on. Tiltmeter buried in ground and the PVC cap is buried under a rock pile to minimize site visibility.