

Earthquake Epicenters and Focal Mechanisms in and around the Lake Joy 7.5-minute Quadrangle, Washington

Earthquake epicenters (1970–2011) and focal mechanisms in the vicinity of the Lake Joy 7.5-minute quadrangle. Arrows on focal mechanisms show the preferred fault plane solutions indicated by our mapping of structures. We attribute many of the earthquakes to offset along strands of the Carnation, Tokul Creek, or Cherry Creek fault zones. Fault plane solutions for the Cherry Creek fault zone (northwest corner of the map) are dominantly northeast-trending left-lateral strike-slip solutions. The Duvall earthquake swarm occurred in this fault zone. See Appendix G for additional discussion of earthquakes in and around the study area, including the sources of the data. See also Plate 2 of Dragovich and others (2011b) for a more detailed map of the Duvall earthquake swarm and to discern the magnitudes of the individual earthquakes in the earthquake swarm. See Dragovich and others (2009b,c, 2010a,b) for a discussion of earthquake data and structures in the adjacent Snoqualmie, Carnation, and Monroe 7.5-minute quadrangles.

