



Figure 1. Panel A: Location of the study area in Washington State, U.S.A. Panel B: Topography of the Olympic Peninsula. Terminal moraines of the west side valleys shown in black (Marshall, 2013; Staley, 2015). Radiosondes are routinely launched from the black star at Quillayute (Rutledge and Ciesielski, 2016). Humptulips (black star) is the location of the paleoclimate record we use. We define the Elwha and Quinault basins as the regions upstream of USGS stream gauges, shown as yellow stars. Panel C: Annual climatological precipitation from the PRISM model (Daly et al., 2008). Panel D: Total modelled precipitation during the OLYMPEX campaign in the winter of 2015-2016 (Skamarock et al., 2008).